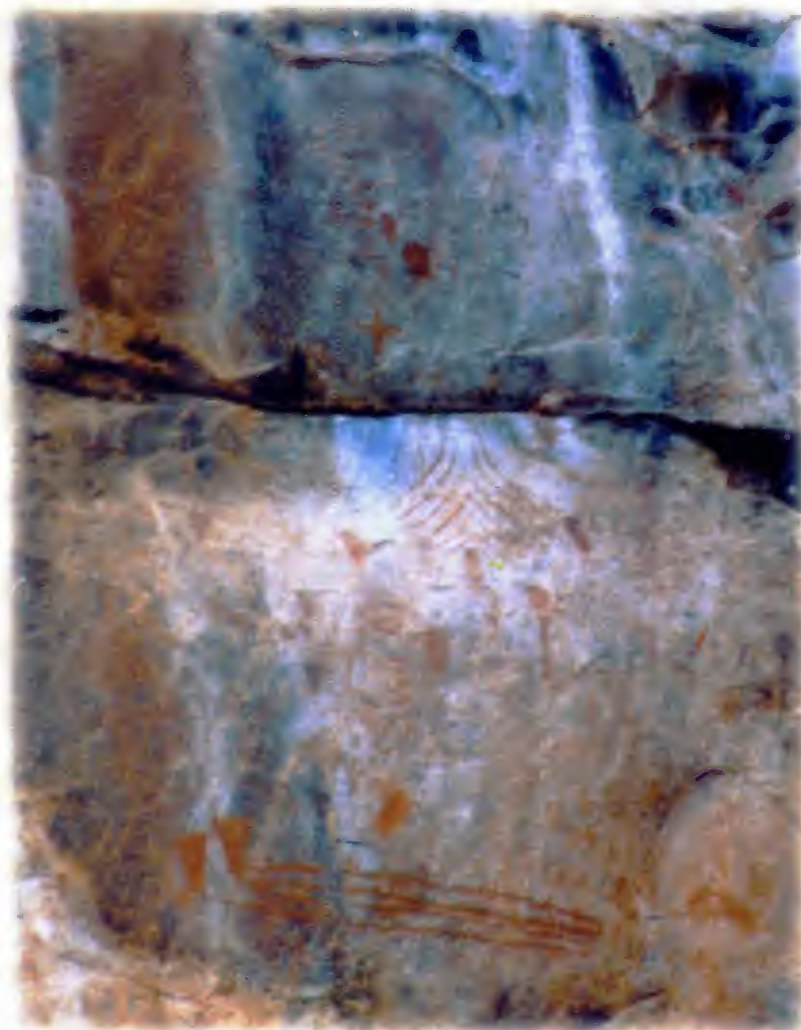


**BULLETIN OF
THE GOVERNMENT MUSEUM, CHENNAI (MADRAS)**

MONOGRAPH ON ROCK ART AND CAVE ART



By

Dr. R. KANNAN,

B.Com., M.B.A., B.L., C.A.I.I.B.,
M.Soc.Sci., (Birmingham, U.K.), Ph.D., I.A.S.,
Commissioner of Agriculture and Museums.

New Series - General Section, Vol.XVIII, No.1, 2003.

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FOREWORD

The Government Museum, Chennai (Madras) has completed one hundred and fifty one years of its existence. Refurbishment of the old galleries many of which have displays dating to the 19th Century has been undertaken on a massive scale not done hitherto. New galleries have also been set up. A Gallery for Rock Art and Cave Art (pre-historic and historic period) in the Contemporary Art Gallery building has been organised for the 151st Anniversary celebrations.

The Rock Art and Cave Art Gallery was set up after a lot of research. Rock Art is considered as Pre-historic or Proto-historic i.e. the period before history was written or cogently deciphered, while Cave Art consists of the sculptures and paintings of the historic period. *Ajanta, Ellora, Mahabalipuram, Sittannavasal* and *Tirumalai* are famous examples of Cave Art. The last three are in Tamilnadu. *Bhimbetka* near Bhopal is the most famous Rock Art site in India. The Tamilnadu sites like *Perumukkal, Vellerikombai, Alambadi, Kizhvalai* etc have been brought into pan Indian focus through this gallery for the first time.

The research team of Curators, some of the staff of the Government College of Art and Crafts and the Commissioner of Museums (Dr. R. Kannan), travelled to Rock Art sites in Tamilnadu many of which are located in highly inaccessible hilly locations. For example, *Vellerikombai* in the Nilgiris is about 14 kilometres by trek into deep forest involving steep climbs and sheer drops. Two team members almost lost their lives during the trek. The team also visited other states like the Indira Gandhi Museum of Man, Bhopal, the famous *Bhimbetka* caves near Bhopal, the Rock Art Society of India at Agra and the museums in Delhi to gather material both knowledge and visual material. They also used the latest technology and browsed internet sites like the *Lascaux* Cave in France.

New display techniques many a first for Indian museums have been introduced in the display. The gallery deals almost wholly with Tamilnadu. It has a walk through diorama and simulations of the atmosphere of the caves. Pre-historic rock art paintings are reproduced on rock like structure. Bas-relief sculpture models of the sculptures found in the caves of Pudukottai district and *Mamallapuram*, three-dimensional models of *Mandapas* etc have been displayed with an interactive (infra-red ray based technology) son-et-lumière programme set off by the visitor. A Touch Screen exhibition on Rock Art and Cave Art and a luminous Tran slide show have also been provided. These provide knowledge while entertaining in inter-active mode. Dr. Kannan has done the technical work and even some of the commentaries are in his voice. This was an effort to save cost.

Since museums are to educate while entertaining, a Monograph on Rock Art and Cave Art has been written by Dr. R. Kannan, the Commissioner of Agriculture and Museums. He has integrated the two hitherto separate art forms of Rock Art and Cave Art with his usual holistic approach into Rock Art and Cave Art. In the part on stylistic dating, he has shown how Rock Art gets fused into Cave Art and evolves into the highly artistic temple paintings with vegetable and mineral dyes. He also shows how the Rock Art stream exists even today among the Kurumba tribals of the Nilgiris. This is the first time that such an analytical holistic approach has been made, integrating these two seemingly separate streams into one grand continuum from pre-history till the present. This holistic approach has been used in his much acclaimed Monograph on Dating in History especially Ancient History (2000 AD). This was also a first then and even now, though other writers have started adopting ideas from this approach.

This publication has brought the fruits of the painstaking research on Rock Art and Cave Art to the reader, both the interested visitor and the scholar. This is valuable research material, which would take long years and travel for an individual scholar to gather. This publication, I am sure, will be useful to students and scholars as it presents most of the knowledge relating to Rock Art and Cave Art in a nutshell.

In addition to his heavy administrative work as head of the Departments of Agriculture and Museums, Dr. Kannan has written this monograph. This technical work of the head of the Department of Museums forms only a minor part of the total workload even for a career museologist. Dr. Kannan has written several important books and monographs earlier. Some of these are the Documentation on the Cannons in the collection of the Government Museum, Chennai (1999 AD), The Monograph on Holistic Dating (2000 AD), Iconography of Jain Images in the Government Museum, Chennai (2001 AD) and Iconography of Jain Images in the districts of Tamilnadu (2002 AD). He has co-authored some of these publications with the curatorial staff. Besides these he has edited the Journal of the museum, written several articles and papers, which have been published among others in the Annual Journal of the Museums Association of India and in the 6th World Colloquium of the International Museums of History at *Lahti*, Finland. Several colourful brochures on the museum and its several galleries have been written, edited and published by him.

The publications made for the 151st Anniversary (2002-2003) apart from this book are :

1. A Manual on the reorganised Bronze Gallery in the Government Museum, Chennai
2. Manual on the Numismatic : Gallery in the Government Museum, Chennai
3. Manual on the Holographic Gallery in the Government Museum, Chennai
4. Documentation of the text of Son-et-lumière on the Rock Art and Cave Art Gallery in English and Tamil (2 books)
5. Documentation of the text of the Video clips on the Touch Screen on the Rock Art and Cave Art Gallery
6. Souvenir
7. Manual on the Progress on Industry and Handicrafts in Tamilnadu (being written)

Brochures

1. Brochure on the Rock Art and Cave Art Gallery
2. Brochure on the Botany Gallery
3. Brochure on the Bronze Gallery

Videos

1. Bronze Making
2. The museum through the ages (from the 1950s till the present)
3. Retrieving from the archives the movie on the museum produced in 1971, converting it into CD and subtitling it in English.
4. Rock Art and Cave Art.
5. Video on the museum in general (present)
6. History of Industry and Handicrafts in Tamilnadu

All the publications have been listed so that in case some of them are lost in the future, this list will serve as a source of reference. This is the first time in the history of any museum that so many publications are being brought out within such a short span of time of about six months, with almost all of it with the personal contribution of the Commissioner.

I compliment Dr. Kannan for this fertile output, which is a peak performance within a short period of time for the Government Museum, Chennai. I am sure that this book will be a valuable reference work in the field in the years to come.



(Mrs. Lakshmi Pranesh)

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31-3-2003



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PREFACE

This is the 151st year of the founding of the Government Museum, Chennai (Madras). The Rock Art and Cave Art gallery commemorates this historic event. It was set up after a lot of research. Rock Art is considered as Pre-historic or Proto-historic i.e. the period before history was written or cogently deciphered, while Cave Art consists of the sculptures and paintings of the historic period. *Ajanta*, *Ellora*, *Sittannavasal*, *Mahabalipuram* and *Tirumalai* are famous examples of Cave Art. The last three are in Tamilnadu. *Bhimbetka* near Bhopal is the most famous Rock Art site in India.

The research team of Curators, some of the staff of the Government College of Art and Crafts at the initiative of then Principal, R.B. Bhaskaran and the Commissioner of Museums (the writer), the last sometimes in indifferent health, travelled to Rock Art sites in Tamilnadu many of which are located in highly inaccessible hilly locations. For example, *Vellerikombai* in the Nilgiris is about 14 kilometres by trek into deep forest involving steep climbs and sheer drops. The team also visited other states like the Indira Gandhi Museum of Man, *Bhopal*, the famous *Bhimbetka* caves near Bhopal, the Rock Art Society of India at Agra and the museums in Delhi to gather material both knowledge (textual) and visual material. Internet sites like the Lascaux Cave in France were also browsed.

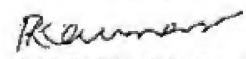
We have simulated the Rock Art sites, Petroglyphs (carving with stone on rock) site of *Perumukkal* (one of the three in India) and some Petrographs ((painting with red/white ochre and brush) sites) in Tamilnadu and Cave Art sites in the gallery. All this material and other research material are presented as a combination of visual and textual material in the Touch Screen installed in the gallery. Knowledge of the ancient world is presented through modern computer technology.

This publication presents an overview of Rock Art- how it started, the technique of painting, where it is found and the different styles adopted as time changed. It has drastically modified Wakankar's stylistic dating to achieve a fusion of Rock Art and Cave Art in a continuum, the latter being the successor of Rock Art as civilisation advanced. Information on how to preserve both Rock Art and Cave Art is also furnished. The different forms of Rock Art are Petroglyphs (chiselling on rock surface) and Petrographs (red and white ochre drawings). Cave Art is hitherto seen as separate. This work using a holistic approach integrates the two, but it also recognises that tribal communities still maintain their Rock Art traditions.

Cave Art is highly stylised. It uses vegetable/mineral dyes. The best example is *Ajanta* but the paintings in *Kailasanatha* Temple, *Kancheepuram*, *Sittannavasal*, *Pudukottai*, *Tirumalai* (Tiruvannamalai District) or the Big Temple, *Thanjavur* are the southern examples of the development of this art long after it had vanished in North India. The painting continued even into the 18th Century AD. Sculptures are another aspect of Cave Art that has travelled into the plains in the form of temples.

In this publication, we have brought out the fruits of our research on Rock and Cave Art. Since this is valuable research material, which would take long years and travel for an individual scholar to gather, we have presented the material in the form of this publication. This publication will be useful to students and scholars as it tries to present most of the knowledge relating to Rock art and Cave Art in a nutshell.

Chennai - 600 008.
30-11-2002


(Dr. R. KANNAN, Ph.D., I.A.S.)

To

The memory of late Sri T.S.Padmanabha Iyer (Retd.)
Superintending Engineer (P.W.D) British India and Composite
Madras State, my grandfather on his centenary (1901-2001) and
my uncle late Sri P.Subramanian. Also to Ms. Lalitha, my mother,
Mrs. Seetha, my wife, Master Sridar Padmanabhan, my son and
Ms.Shrikalaa, my daughter for their encouragement and help.

Dr. R.Kannan, Ph.D., I.A.S.

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Thiru K. Lakshminarayanan, Curators Thiru R.Balasubramanian,
Thiru J.R.Asokan and Dr. C. Maheswaran. Thiru G. Ramesh,
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valuable assistance.

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ROCK ART AND CAVE ART

WHAT IS ROCK ART AND CAVE ART?

Art work created on the richly textured background of rocks, the walls and the ceilings of caves are designated as 'Rock Art'. It can also be extended to cover the art, both paintings and sculptures made on rocks and caves by people during the historic period. Then it becomes 'Cave Art'. Therefore, the term 'Rock Art and Cave Art' applies to an array of art work such as 'Paintings', 'Engravings', 'Carvings', 'Sculptures' and 'Cupules' that have been depicted over the rock surface of Rock Shelters, popularly known as 'Caves'. Therefore, Rock Art is also referred to as 'Cave Art' in common parlance, especially when it deals with the historic period.

ROCK SHELTERS AND THEIR LOCATIONS

Due to their general location in highly inaccessible places, Rock Art remains as unknown or little known treasures of art throughout the world. As the sites wherein the Rock Art have been painted/pecked/bruised/battered/grooved/engraved were also used as temporary shelters, they are popularly designated as 'Rock Shelters'.

Altogether three different principal types of Rock Shelters have been identified, viz.,

- i. Cliffs - that are formed by folding and faulting of the rock;
- ii. Gorges - that are formed by flowing of water over the rock; and
- iii. Boulders - that are formed by erosion of the upper layers of the rock at the top of the hillocks.

ROCK SHELTERS : A GENERAL VIEW

Generally, Rock Shelters are relatively defensible and safe. Some of them

are situated at strategic positions. Most of them are good lookouts for spotting animals when they are browsing, grazing or drinking. Generally, they are rather safe places during hot summers, cold winters and monsoon rains.

ROCK SHELTERS - AS SACRED PLACES

Rock Shelters were considered over the years as sacred, magical and enchanted places. They were the centres where regular visits were paid by pre-historic and historic people for preparing for rituals and meetings throughout the ages. Further, these Rock Shelters were repeatedly painted or engraved for a long time for ceremonial purposes.

ROCK SHELTERS - AS ABODES FOR HABITATION

From a study of the Rock Shelters, it appears that these were used for habitation and other purposes. For water, food and raw materials for producing tools, mankind must have been required to leave the Rock Shelters. It is, therefore, construed that these Rock Shelters must have been occupied only seasonally. Further, as there are no fire markings found in the Rock Shelters, it is conjectured that these were never used as places for cooking.

HOMOGENEITY OF ROCK SHELTERS

A quick survey of Rock Shelters in different centres and their adjoining regions and the study of the Rock Shelters themselves indicate that a remarkable homogeneity exists in the selection of sites and the subject matter of Rock Art. That is to say, Rock Shelters are usually situated on the most picturesque spots on the top of the hillocks overlooking a valley. Rock Shelters always exist at a commanding position.

EXCAVATED CULTURAL REMAINS FROM ROCK SHELTERS

Hundreds of stone tools and their raw materials in the form of cores - as nodules of chert, jasper, chalcedony and agate have been excavated as the prime cultural remains from the Rock Shelters. Further, potsherds have also been recovered from the excavations conducted at the Rock Shelters.

ROCK ART: A GENERAL PERSPECTIVE

Mankind stayed either permanently or temporarily at the Rock Shelters carrying out day-to-day activities including ritual, religious and other cultural practices. During such activities, human beings indulged in artistic expression as pictorial decorations in the form of rock paintings (i.e. Petrographs) and plastic decorations in the form of rock engravings (i.e. petroglyphs).

Such 'Rock Art' is a mine of information, which can be directly understood by students to understand the cultural backdrop, without any initiation into Anthropology, Art History or Archaeology. Further, Rock Art is an extremely important part of the cultural heritage of humanity. As they are found throughout the world as the earliest manifestations of the unique human capacity for abstraction, synthesis and idealisation, they constitute a truly universal human heritage.

Rock Art reveals aspects of the imaginative and emotional life of mankind, which no other available evidence of early civilisation is able to do. Besides, Rock Art represents successive stages of human adventure, from the stone age to the present day hunting-gathering, pastoral and incipient agricultural societies, whose cultures are threatened with extinction. Further, Rock Art is simple, sharp and energetic and obviously related to the technical and potential development of culture. As they are the symbolic representations of the total personality of early man, as symbolic as the art of children, they are known as the 'childhood of art'. However, Rock Art remains as the principal evidence of the earliest stages of mankind's cultural history before the advent of writing, creative expression, economic and social activities, ideas, beliefs and practices.

On the whole, the Rock Art, which was executed by primitive artists, clearly displays their perception of animals and human beings as being in close relation to each other. It also shows their environment and culture. Rock Art portrayals exist either in outline or in silhouette. They are forceful in the sweep of the lines displaying the moods of the animals and the human beings.

In general, Rock Art is the expression of the aesthetic sense of the artist, wherein the integration of biological capabilities and cultural manifestations

have been shown interwoven. Therefore, Rock Art, which consists of different aspects of life, may be observed from the aesthetic and religious points of view.

PETROGRAPHS vis-à-vis PETROGLYPHS

Rock Art dichotomised chiefly into 'Petrographs' (Rock Paintings) and 'Petroglyphs' (Rock Bruisings/Rock Engravings) as seen in photos, page nos. 17 and 18. Of them, the Petrographs are high in incidence while the petroglyphs are relatively lesser in count. Generally, on the outlines scratched over the rock surface, by means of tools (stone tools or metal tools, as the case may be) the paint (mostly pigments of 'red ochre' and to a lesser degree 'white ochre' and still lesser degree 'orange', 'yellow', and or 'green') is painted by means of a brush (tree twig or porcupine quill). This is described as 'painted rock', 'painted Rock Shelters', 'pigmented paintings', 'rock painting's etc. referring to the medium and the type of art. Contrary to this, petroglyphs were produced by pecking/bruising/battering/grooving/engraving (but not chiselling) the rock surface, employing a pointed tool (mostly, hand-axe stone tool or metallic tool) and a hammer stone upon it as a fabricator. In short, the 'Petrographs' are identified as the 'pictorial decorations' while the 'petroglyphs' are the 'plastic decorations' of the Rock Art depictions.

Cupules (the characteristic cavities on the rock surface seen as 'Cup marks', by scooping out the rock surface circularly so as to leave semi-circular depressions) are also included as a specialised category of petroglyphs. Consequently, they are popularly referred to as 'Cup marks' as well.

The cupules or cup marks are considered as ubiquitous within the Rock Art tradition. They are of hemispherical shape of varying depths (ranging from 1.1 mm to 13 mm) and occur in extremely numerous numbers in all the continents of the world. The cupules or cup marks feature prominently in very early Rock Art. It may be mentioned here that all the earliest known occurrences of Rock Art in Europe, Asia, Australia and North America are of cupules.

The deepest point of the cupules seems to be below the centre of each cupule, which is probably related to the production process. Blows were

administered from above rather than from below or sideways as they generally occur on vertical surfaces.

The question of the age of these cupules is of great importance to Rock Art research. Their Pleistocene antiquity is geomorphologically (study of development of the surface features of the earth) almost self-evident. No other Rock Art form of that period has so far been demonstrated to exist as a global pattern. On the basis of the geomorphological analysis and reasoning, the cupules are most probably either of Middle Paleolithic or Lower Paleolithic age. Micro-erosion study of the cupules has been useful in investigating the possible durations of specific phases of geomorphologic history.

The graphic nature of the rock paintings and the rock engravings are a fit medium for artists to present the visualisations of early man's life.

While in India, Rock Art consists usually of pigmented paintings (i.e. 'Petrographs'), in the rest of the world both rock paintings and rock engravings (i.e. 'petroglyphs') also are fairly equally represented. In the sandstone Rock Shelters of Central India and the quartzite Rock Shelters of Southern India, a greater number and variety of Rock Art sites are found mostly as 'Petrographs' and to a lesser degree as 'Petroglyphs' than in any other region of the world.

THE ARTISTS WHO CREATED ROCK ART

Unknown artists of successive generations have been frequenting Rock Shelters, moving on the trek route of the smaller game animals, living on the small forest produce and replenishing their stocks of tools at the quarry sites near the Rock Shelters. They used the tools and implements below the Rock Shelters to create the art forms in response to the passing urge of the fleeting moment that they spent on this earth in an elusive search for felicity, security and beauty.

The Rock Art artists described themes reflecting their specific socio-economic situation, at a particular moment of demographic movement and human evolution. Since their life was simple, their art was initially one-dimensional. They dealt in outline rather than in form. Consequently, their

images were faithful to nature and instinct. The shackles of stilted formalism had not yet taken over.

The people responsible for the creation of Rock Art can be classified into two categories: First, those who occupied the lime caves, and second, those who dwelt in the open Rock Shelters. However, as the subject matter of the Rock Art is exclusively wild animals and humans in conflict with them and most of them depict scenes of dances, hunts, or magical-religious rites, it appears nearly certain that the artists of Rock Art were from technically not so advanced cultures.

Rock paintings and rock engravings all over the world are now studied not only for their subject matter but also for their antiquity and techniques employed.

TECHNIQUES EMPLOYED IN ROCK ART

The choice of the technique is often related to the type of rock being used as the canvas for creating and depicting of Rock Art forms. Rock Art is generally found in the form of Petrographs in red ochre, yellow ochre, white ochre and rarely in orange, green or black. The Petrographs are normally painted on vertical or near vertical rock faces or on the under surface of projecting or overhanging rocks.

The painting technique is often the 'Wet Colour Technique'. The colour used to paint the Petrographs are haematite red in various tones or white or yellow or black or blue tints. However, no attempt was made to dress the rock, which was neither plastered nor painted before depicting the art forms. In other words, the pigments have been applied straight on the rock surface.

In the case of Petroglyphs, the tool (mostly hand-axe stone tool or metallic tool in a lesser degree) was used to peck or bruise or batter or groove or engrave the rock surface by employing a hammer stone tool over it. The rock surface was never chiselled. Percussion with a pointed stone tool, probably a hand-axe, produced the cupules. Here, the blows were administered from above rather than from below or sideways, as the cupules generally occur on vertical surfaces of the rock canvas, as mentioned earlier.

PIGMENTS USED IN ROCK ART

Naturally occurring earth pigments such as red ochre, yellow ochre and white clay were used in painting the Petrographs. In other words, the earth colours, which were available as pigments in the vicinity of the Rock Shelters as residual products of the rocks, were utilised to paint the Rock Art. The compounds found in these earth pigments have been identified as follows:

Red	Oxides of iron like haematite
Orange	Oxides of iron like haematite
Brown	Oxides of iron like haematite
Yellow	Oxides of iron like haematite
White	Kaolin
Black	Magnesium Oxide
Deep Purple	Magnesium Oxide
Green	Compounds of Copper

MEDIUM USED IN ROCK ART

In some cases, the pigments have permeated deep into the fabric of the rock, indicating their use in a fine liquid form. Such a kind of preparation of the medium in a fine liquid form must have entailed the laborious process of pulverisation of the lumps of naturally occurring pigments and levigation (grinding into fine powder) of powder in water for preparation of a fine aqueous suspension. By the longevity of the Rock Art it can be presumed that water was the medium used for the pigments and it is probable that the slow action of water on the siliceous rock resulted in the formation of colloidal silica and the latter produced an imperceptible layer on the pigments, thereby fixing them firmly to the rock surface and in turn rendered them immune to the solvent action of water.

SCENES DEPICTED IN ROCK ART

In the earliest Rock Art, both human as well as animal figures have been found associated. The earliest animal figures are huge in size and sometimes

cover the entire canvas. As the period advances, gradually the size of the animal diminishes though maintaining their natural forms. Linear decoration is found in the form of horizontal, vertical and tapering lines, loops, dashes etc. The stylisation of human forms begins from this series. From this time, we get three distinct features in human portrayal. The figures are either shown in linear forms termed as 'stick-shape', 'S' twist forms' and the female figures are drawn in 'square-shape'.

The stick-shaped figures of human beings generally represent hunters in action. This stick-shape forms the basic figure with heads, hands and legs attached to a one-line torso. Anthropomorphic (ascribing human form or characteristics) representations have got extended from these stick-shaped figures to an outlined torso in the largest red figures as time advanced.

The stick-shape is symbolically presented in linear forms and such stick-figures do not show the kind of skill in depiction, which is characteristic of animal figures. These stick-shaped figures are capable of depicting different human activities such as hunting, fighting and ritual observances.

Contrary to this, the square-shaped figures drawn to represent the female figures are always painted in profile, having triangular heads and both the hands and breasts are shown on one side only.

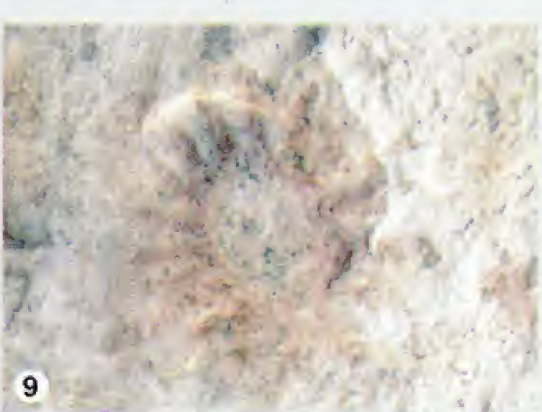
As regards the 'S' twist forms, they are always shown in dancing posture and are accordingly designated as 'dynamic figures'.

Apart from the aforesaid shape factor, the Rock Art depictions could also be classified variously based on the figures they represent as follows:

- I. Anthropomorphic forms
- II. Zoomorphic forms (Representation of a man or God in the form of an animal); and
- III. Miscellaneous forms

While the first category represents human beings, the second category comprises of animals. 'Hand prints' (also designated 'palm prints'

SCENES DEPICTED IN ROCK ART





Lascaux Cave - France



Bhimbetka - Madhya Pradesh



Vellerikombai - Tamilnadu

or 'Hand silhouettes'), '*Alpana*' (*Kolam* or figures drawn on the ground in India usually with flour) 'Trees', 'Geometric forms' and 'Symbols' constitute the miscellaneous forms.

I. Anthropomorphic Forms:

Human figures make their entry at a fairly late stage. Single human figures are seldom depicted and usually they are depicted forming a part of a hunting scene, dancing scene, fighting scene or ritual scene. (Picture no. 1, page no. 9).

In hunting scenes, animals have been shown as having been attacked by a man or a group of men with weapons such as bow and arrows, spears etc. Hunting by laying traps also seems to be a common method. In such Rock Art depictions, the traps have been symbolised by making concentric circles just in front of the animals. In other trap scenes, elaborate arrangements have been shown with minute details. The hunters are shown, at times, wearing a variety of masks. These include the C-shaped, bird-head shaped, ox-head shaped, square-shaped masks and masks adorned with antlers, horns and feathers. The hunters are shown wearing pubic-aprons with ends hanging between their legs. Such masked hunters are conceived to be wizards or shamans, who indulge in some kind of magical-religious rites to ensure successful hunts.

There are no depictions of human beings in conflict among themselves in the earlier periods. In some of the later Rock Art, the fighters are decorated differently suggesting inter-group conflict. Mounted horsemen are shown attacking warriors on foot, signifying the conflict between the people of the valleys and the Rock Shelter dwellers. Soldiers are armed with bows and arrows, spears or swords. Further, they are shown wearing heavy head dresses such as helmets, crowns and brims.

It seems clear from the Rock Art paintings that dancing had a central role in the ceremonies of the people. Moreover, dancing could have served as a means of inducing disciplined common effort. Consequently, the dance ceremonies could have helped to weld the normally fearful and individualistic hunters into a skilful hunting party ready to die, if necessary. The elastic 'S' twisted figures representing dancing figures are shown in the form of throwing the body and limbs dynamically in the air in order to depict the vigorous movements of dance.

II. Zoomorphic forms :

More than 23 species of animals are recorded from Rock Art paintings, comprising both wild and domesticated animals. While the wild animals comprise of tiger, panther, cheetah, fox, hyena, bison, rhinoceros, elephant, bear, boar, blue bull, black buck, spotted deer, swamp deer, deer, monkey, rabbit, peafowl, jungle fowl and porcupine, the domesticated animals are the horse, buffalo, cow/ox, goat and dog (Picture nos. 2-4, page no. 9).

Animals are always shown ambling, trotting, galloping, leaping and running with giant strides. Further their body contours, horns, ears, muzzles, legs, hooves and tails are faithfully depicted. Sometimes, the 'life-lines' such as food channel, windpipe, musculature, skeleton and foetus growth are also shown in x-ray style. Contrary to this, at times, the body silhouette is broken with an incipient x-ray feature, by leaving a simple rectangle unpainted on the torso of the animals. Infilling of unpainted torso portraits of animals are done with a variety of geometric designs and decorative units, as the period of time gets advanced.

Bisons have been stylistically depicted in Rock Art. They look simple with a shallow hump and short diverging horns. Depiction of giraffe in deep red silhouette is seen at the *Adamgarh* Rock Art site in Madhya Pradesh.

Domestication of animals for activities such as ploughing, load bearing and for carrying human beings are also shown in the Rock Art depictions. The depiction of bull-leaping and cattle sacrifice in Rock Art conveys that presence of atleast partially domesticated cattle can be assumed in that period. It is conjectured, however, that the people of the Rock Shelters recorded scenes of the valley people, including the spectacle of bull leaping, complete with ribbons on the bull's horns and tail.

Horses are elaborately decorated with fancy reins, saddles and ornaments, while caparisoned horses and elephants are also found while being used in fighting.

Apart from the regular motifs of load bearers, wizards/shamans, certain very rare depictions of hills, fish, birds, tiny triangular human figures, water carriers, hunting of elephants, sexual organs, and sexual activities are also shown in the Rock Art traditions.

III. Miscellaneous Forms:

(i) Palm Prints/Hand Prints/ Hand silhouettes

These motifs were made by pressing a hand against the rock surface and then spraying or splashing the red ochre paint on the surface until the covered area left a light spot, surrounded by red. Such hand stencils are said to have protective powers and were made to ward off evil.

Among such handprints, both positive and negative hand stencils are found. Both the right hand and the left hand were used to make the hand silhouettes. Such palm prints, according to their size, may indicate the age and sex of persons involved in the Rock Art.

(ii) *Alpana*

Alpanas in the form of various geometric designs are found depicted in Rock Art (Picture nos. 5-8, page no. 9).

(iii) Trees

Trees are found associated with scenes of honey collection and collection of fruits from them. However, in the Rock Art of the historic period fenced trees are also shown.

(iv) Geometric forms

Geometric motifs such as honey comb, concentric rhomboids, hexagons, squares and rectangles are also found in a number of Rock Art sites. Such identical designs have also been used to fill up the body of birds, animals and even human figures.

(v) Symbols

From very early periods until quite recently there is a steady procession of symbols such as the cross, the circle, the *swastika* and symbols which are hut like, fencelike or trap like, and also astronomical pictures like sun etc (Picture no.9, page no.9). The symbols in the Rock Art depictions are always in the form of dots and lines, loops and circles, circles within circles, dots within circles or straight line with two circles on either end. These symbols, no doubt, are symbolic representations of traps, animals and human figures.

REASONS FOR THE ROCK ART DEPICTIONS

We cannot know with any degree of certainty why the artists of Rock Art have created such art. Magical-religious practices (such as shamanism, totemism, fertility rites, ceremonial symbolism), communication, calendar devices, decoration and doodling may be attributed as the varied reasons for the creation of Rock Art forms. For instance, in hundreds of Rock Art depictions men are seen armed with barbed harpoons, spears or bow and arrow. They attack, surround, or dance around an evidently doomed animal. Such Rock Art depictions may represent ceremonial magic before the hunt, invoking a successful outcome.

Further, the food-gathering rock artists have created Rock Art depictions of caparisoned elephants and horses with elaborate ornamented bridles. The evidence from such Rock Art suggests a succession or relationship between the Rock Shelter people and the much more advanced cultures of the nearby villages, plains and travelled roads and paths. Sometimes, the Rock Art includes markings or symbols that are not representational and that appears to be no more than purely decorative. For instance, Dr R.Kannan, Ph.D.,I.A.S., made a study of the *Vellerikombai* Rock Shelter. He has analysed the picture on the site as follows: 'I saw a rock painting in *Vellerikombai* rock, near *Kotagiri* in Nilgiris district, Tamilnadu. It has been copied on a copper plate. It is Rock Art in Red Ochre. This is away from the settlement of the *Kurumba* tribals and therefore untouched subsequently. This can be traced to the early Indus period circa 5000 BC. It shows a human figure with a ring around his head, who is being sacrificed to please an extra-terrestrial type of figure (Extra Terrestrial - GOD) who with two antennae is coming out of a flame on top of an altar or hill. The flame could be a spaceship with flames due to rocket engines. The tree is the place of worship common in ancient times with a chief/ priest watching or performing the sacrifice. The tree could represent the Tree spirit common in Indus seals. This corresponds well with the theory of Hancock who shows rock carvings in Egypt and South America where human beings are sacrificed to win the favour of Gods. This again shows the close connection between civilisations throughout the world. The hand shows the '*Abhaya Hasta*' or blessing posture so common in our temples. The '+' shows prosperity. It is the forerunner of Tamil *Brahmi*. Therefore, the scene depicts the prosperity that can be expected to come out due to the sacrifice. The paintings referred to in *Keezhvalai* are similar red ochre Rock Art (Mathivanan R, 1995, pp. 72-73). The altar could be a *Homa-Kunda* and God coming out of it in ancient days could actually be an E.T. coming out of a spaceship described in our scriptures. Eric Van Daniken proceeds on similar lines in his book ...' (Kannan Dr. R., 2000, p.46).

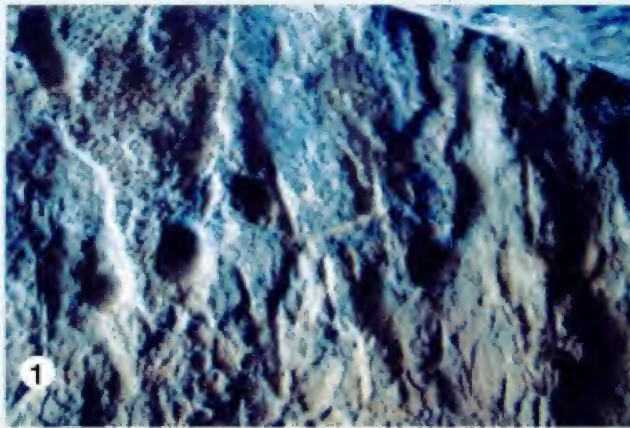
Study of the many rock engravings on granite boulders in South India may provide additional evidence about motivation for artistic effort. In short, for many thousands of years, individuals with artistic skills were encouraged by their contemporary cultures to use their talents for a succession of reasons: religion, magic, enrichment of ceremonial occasions, secular records, symbolic communication and decoration of dwelling places. In other words, society tends not only to assimilate and utilise the values of art but also to take permanent possession of the works themselves.

ROCK ART IN THE WORLD

Discovery of magnificently painted bison in the caverns of Altamira, on the north coast of Spain during the 19th century AD kindled the interest of art connoisseurs, art historians, anthropologists and archaeologists all over the world to probe, discover and identify further treasures of Rock Art in and around their homelands and other places. Consequently, Rock Shelters that contained Rock Art were identified in various parts of Europe; Northern, Southern and Eastern Asia; North, Central and South America; Eastern, Southern and Saharan Africa; and Australia. Nevertheless, one should bear in mind that Rock Art is very unevenly distributed in the world and India is one of the three largest concentrations of this World Heritage; the other two being South Africa and Australia. Is it the cradle of civilisation? It appears so. (Photos, page no.10.).

ROCK ART IN INDIA

In India, at least a few of the rural people have probably known for centuries of the existence of Rock Art in the Rock Shelters quite near to their dwelling places. But the first reports by outsiders who recognised the Rock Art were not contemporary. The reports came from the British Officials who had some training and great interest in pre-historic archaeology.



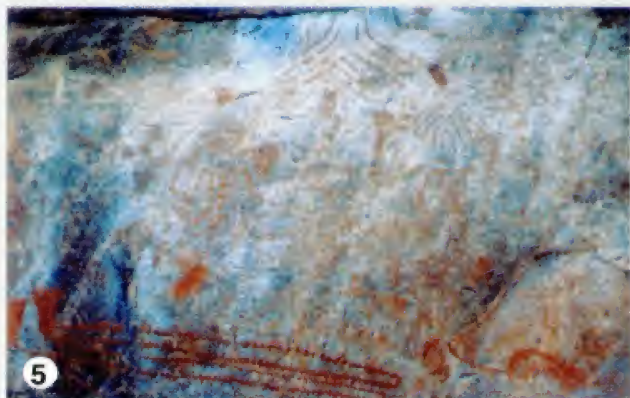
Perumukkal - Petroglyphs



Bhimbetka - Petrograph - Red ochre



Keezhvalai - Petrograph - Red ochre



Vellerikombai - Petrograph - Red ochre



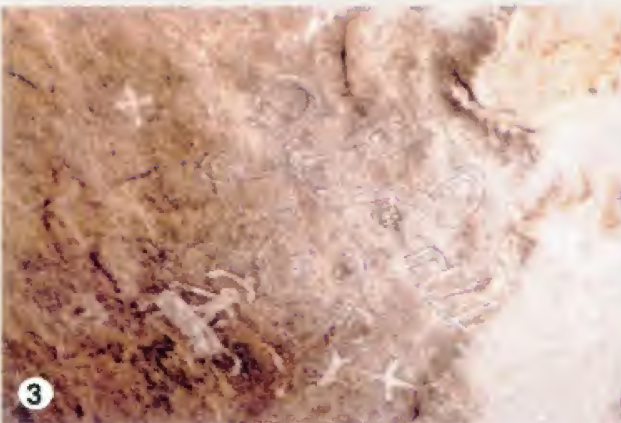
Iduhatti - Petrograph - Red ochre



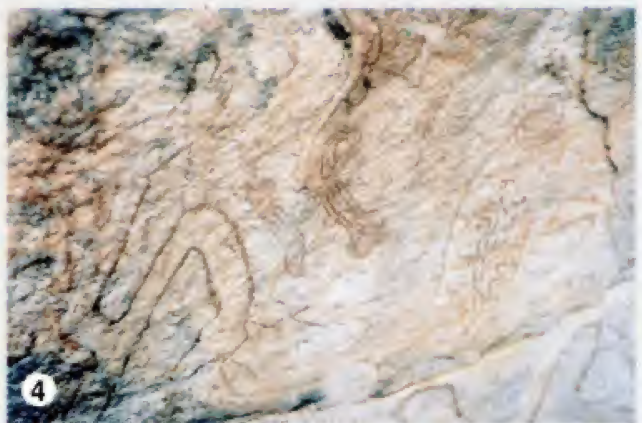
Alambadi - Petrograph - Red ochre



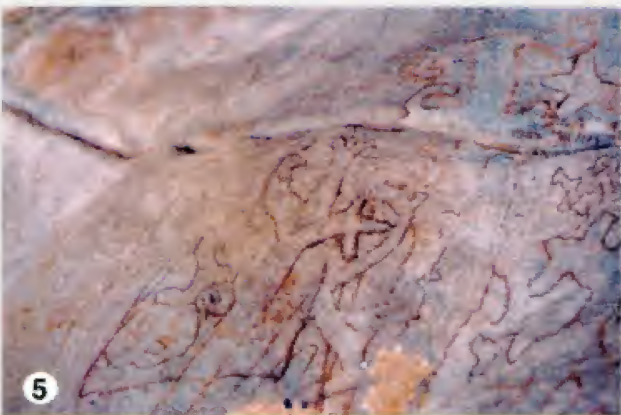
Vellerikombai - Petrograph - White ochre



Chenrayanpalli - Petrograph - White ochre



Alambadi - Petrograph - Red ochre



Alambadi - Petrograph - Red ochre



Keezhvalai - Petrograph - Red ochre

Most of the Rock Shelters in India are in a triangular area with its base in the north running from the Chambal river basin at the west to Banaras (Varanasi) at the East, and its apex is in the South in the Nilgiris; within this stretch of area more than a thousand Rock Shelters have been identified by trained observers. But this may probably be less than half of the Rock Shelters that exist, since many areas known to have rock formations with shelters suitable for depicting Rock Art have not been surveyed and examined by professionals till date. Interest within India is beginning to gain momentum but it is still not commensurate with the extraordinary richness and variety of Rock Art available for study.

ROCK ART IN TAMILNADU

Tamilnadu has over 500 Rock Art sites. Many new sites have been identified in the districts of Nilgiris, Coimbatore, Dharmapuri, Madurai, Villupuram and Vellore. Petroglyphs are found in *Perumukkal* of Villupuram district. In *Alambadi* Rock Shelter (20 Kms. from *Villupuram* on the Villupuram-Tiruvannamalai road), x-ray style Petrographs depicting human and animal anatomy are seen. In *Sethavarai* of Villupuram district, animal motifs such as deer, tiger, fish, etc., are depicted. In *Keezhvalai* of the same district, human beings with masks are shown apart from celestial beings such as the sun, the moon, and stars. In *Chandrapuram* and *Chenrayanpalli* of Vellore district, animal motifs are shown predominantly. In the *Ezhuthupparai* Rock Shelter near *Vellerikombai* (14 Kms. by arduous trek in mountainous deep forest from Kilkotagiri) and *Iduhatti* (near Kattabettu) of the Nilgiris, various depictions of both human forms and animal forms are painted in red ochre and white ochre, (Photos, page no.17,18).

HISTORIOGRAPHY OF INDIAN ROCK ART RESEARCH

The year 1868 AD will remain a milestone in the history of Indian Rock Art research. A.C.Carlleyle, a British national introduced Rock Art study to

Indian soil. This was a decade earlier than the discovery of Rock Art and start of research into it in Western Europe, which took place in the year 1879 AD. Carlleyle unravelled the Rock Art in the *Vindhya* hills of Mirzapur and Rewa districts of Madhya Pradesh. However, as he imparted no information on either the nature or the localities of his discoveries, his knowledge died with him.

In 1883 AD, another discovery of Rock Art was brought to light by John Cockburn. Later in 1896 AD, F.Fawcett found the rock engravings in *Edakal* cave near Ganapativatta town in the district of Wyanad of Kerala. These rock engravings show depictions such as human beings, animals, various symbols- apart from *Brahmi* inscriptions. A couple of years later, C.W.Anderson along with C.J. Balding explored a rock painting site near *Singanpur* of Raigarh district of Madhya Pradesh. However, due to lack of pertinent evidence, he could not assign any date to these paintings. Later, Manoranjan Ghosh studied the paintings at *Singanpur*, *Mirzapur* and *Hoshangabad*. He studied all the paintings thoroughly and ascribed a certain chronology to them. The period of *Mirzapur* rock paintings, according to him, ranges from 4th century AD to 10th century AD. Further, in 1922 AD, he surveyed the *Adamgarh* rock paintings near *Hoshangabad*. The Rock Art studies of India made further progress in the year 1932 AD, when D.H.Gordon studied the Rock Art of *Mahadeo* hills in *Pachmarhi* of Madhya Pradesh. First, the rock paintings were assigned to 5 series of styles. Later on, he himself restricted them into 4 main series, each having early and later phases. This classification of Gordon was based on superimpositions of different colours of figures, their styles and material cultures. He dated most of the third and fourth series paintings of *Mahadeo* hills to the period from the 5th century AD to 10th century AD, while the date of the earliest paintings goes back to circa 700 BC. Later Allchin undertook the study of rock paintings at *Morhana Pahar* of *Mirzapur*, *Kuppal*, *Maski* and *Piklihal* of North Karnataka and Andhra Pradesh. V.S.Wakankar in 1958 AD discovered *Bhimbetka*, a world famous

Rock Art site near *Bhopal* in Madhya Pradesh. Later, he associated the paintings of *Bhimbetka* with the Mesolithic or early Neolithic/Chalcolithic cultures on the basis of his excavated findings from *Maski*, *Kharvai* and *Kayatha*, apart from his excavations conducted at *Bhimbetka*. However, a comprehensive work on Rock Art was first published by Jagadish Gupta in 1967 AD. Apart from analysing the different scenes and figures occurring in Rock Art, he highlighted the geographical locations of these rock paintings, their importance and dating problems. In 1968 AD, S.K. Pandey studied the rock paintings of Sagar region of Madhya Pradesh. Besides this, he further investigated the rock paintings at Singanpur, *Kabrapahad*, *Katni*, *Banda*, *Panna*, *Chatarpur*, *Raisen*, *Bhopal*, *Adamgarh* and *Chambal valley*. According to him, the earliest paintings belong to the pre-historic period on the grounds of (i) Superimpositions (ii) Art styles (iii) Subject matter and (iv) Excavations. During 1965-68 AD, A. Sundara identified new rock paintings at *Hire Benkal* of Raichur district in Karnataka. It led him to initiate research into Rock Art in the Region with the discovery of many Rock Art sites in that region. Yashodhar Mathpal examined the Rock Art of *Bhimbetka* in minute detail from 1973 to 1977 AD. He placed them into various periods in a chronological order. In 1975 AD, Sankar Tiwari discovered a large number of Rock Shelters in the source region of the Betwa river. These painted Rock Art sites lie in a belt forming 'S' shape. Hence, they are termed as the 'S' belt region. Erwin Neumayer carried out his Rock Art research at *Bhimbetka*, *Lakhajoor*, 'S' belt of *Betwa* region, *Raisen*, *Chambal valley* and *Badami* during 1975-76 and continued it for another seven years. From 1976 onwards, K.D.Banerjee investigated the Rock Art at *Pangoraria*, *Banya*, *Talpura*, *Katni*, *Rewa*, *Hanumana*, *Mirzapur*, *Bhimbetka*, *Raisen* and *Pachmarhi*. Recently, Vijay Lanjewar examined the *Pachmarhi* rock paintings and observed a striking resemblance with the tribal art of Central India.

Prof. Dr. R.Madhivanan has done extensive and pioneering work on Rock Art

caves in Tamilnadu. He accompanied the team that went along with the Commissioner to *Perumukkal*, *Keezhvalai* and *Alambadi*. He has written a book 'Indus Script among Dravidian Speakers' (1995) in which he has come out with the theory based on his concordance of the Indus script that the Rock Art figures are the forerunners of the Indus script. He also deciphers Indus Valley script along with I.Mahadevan I.A.S. (Retd.) as Proto - Tamil as contrasted with Prof. Jha and other North Indian writers who claim to have deciphered it as Sanskrit.

Recent discoveries made in Kashmir, Shiwaliks, Assamese-hills, Ghats of Tamilnadu and Kerala, the boulder shelters in Gujarat, Andhra Pradesh, Orissa, Karnataka, the sand stone shelters of Rajasthan, Maharashtra, Madhya Pradesh, Bihar and Himachal Pradesh show that there is hardly any state which does not have Rock Art in India.

CULTURAL SEQUENCE OF ROCK ART

The oldest of these Rock Art depictions probably date from the 'Upper Palaeolithic age' (Earliest Old Stone Age) over 100000 years ago and they continued to be made successively in the 'Middle Palaeolithic Age' (Medieval Old Stone Age) 'Lower Palaeolithic Age' (Latest Old Stone Age), 'Mesolithic Age' (Middle Stone Age), 'Neolithic Age' (New Stone Age), 'Chalcolithic Age' (Copper Age), 'Megalithic Age' (Iron Age), Early Historic Age and Historic Period.

RECONSTRUCTION OF ROCK ART THROUGH PHOTOGRAPHY

Rock Art shows an economy of line, a sense of graceful motion and elegantly accurate observation. This makes Rock Art significant works of art in its own right. Such Rock Art that has been depicted in Rock Shelters is often very faint and many layers of other works of Rock Art are often found superimposed upon it. Robert R.R.Brooks (1976) and R.G.Bednarik (1994) have developed techniques of their own for recreating the original clarity in photographs of Rock Art depictions.

Reconstruction Technique of R.R.R.Brooks:

Most of the Original photographs of Rock Art have been ‘reconstructed’ by a method that does not change the outline of the original depictions or the rock backgrounds. This technique can be carried out in five consecutive stages as follows:

- Stage I Project the photograph slide of the rock painting in a dark room on to a 12” x18” piece of art paper.
- Stage II Trace on the paper, with a faint pencil line, the outline of all the painted areas discernible in the projected image (Care must be taken not to imagine lines that are not there, but a limited amount of interpolation may be permitted when a blank space in a painted line is clearly the result of flaking away or encrustation of the rock surface).
- Stage III Fill in the areas bounded by the pencilled tracings on the art paper, using acrylic watercolour pigments and matching the watercolours to the original colour of the rock paintings as closely as the eye can judge.
- Stage IV Once again project the photograph of the rock painting on to the art paper which now contains the watercolour copy, exactly fitting the projected image of the original rock painting to the watercolour copy and
- Stage V Rephotograph the combination of the watercolour copy and the projected image of the original photograph. Thus, all texture of the painted rock surface, the surrounding rock and any superimpositions that there may be on the original rock paintings, are imposed on the watercolour copy.

If the rock painting is done with white or pale yellow pigment (and is therefore lighter than the surrounding rock surface) the technique must be reversed – i.e. the pencil-traced area of the rock painting must be left blank and the unpainted area of the surrounding rock watercolour given a darker shade of the rock colour (This increases the contrast between the light coloured pigment and the rock).

Reconstruction Technique of R.G.Bednarik:

R.G.Bednarik proposed a new technique of reconstitution in Rock Art photography by employing computer digitising. The principal colour calibration and re-constitution in this technique, involves the following five basic steps:

- Step I Translate the photographic record (print, negative, slide, film or video) into digital information (This record must include an image of the calibration reference device (i.e. the colour scale which has been photographed together with the Rock Art subject).
- Step II Instruct the computer to recall the true digital colour information contained in the reference device and compare it with that found on the photographed colour chips as they appear now (The computer determines overall distortion irrespective of source).
- Step III The computer then compensates for the distortion measured in each primary colour, reconstituting colours as required to re-create the known true colours in the photographed colour scale.
- Step IV By extending the same corrections to the rest of the image and assuming that distortion was uniform over the entire image surface, the original subject colours are re-constituted by the same process and

Step V The corrected image is then sent as output on the required format (colour printer, electronic storage).

STYLISTIC AND CHRONOLOGICAL CLASSIFICATION OF ROCK ART AND CAVE ART

On the basis of physical condition, manner of execution, filling decoration, superimposition and the subject matter, Rock Art has been classified into various 'styles'. Conversely, Rock Art can be classified on stylistic basis however difficult the task would appear to be at the beginning. Eventually, all known examples of depictions in Rock Art will be interrelated under a comprehensive scheme of stylistic classification. The stylistic variation of Rock Art has a varied range. A full scale of Rock Art exists in a linear style. At one end of the scale, a rough, thick lined, abbreviated style represents the Rock Art depictions, while at the other end the lines are thin. In addition to such linear, abbreviated and splashing styles, a selection of depictions is portrayed in a naturalistic manner. Skeletal forms or life-line forms in x-ray style is yet another style available in the Rock Art traditions. Further styles include outlines, stick figures and square figures and stylised geometric representations. We have integrated Rock Art with Cave Art, which is a later development in a holistic approach.

V.S.Wakankar prepared a style chart that summarizes five periods and twenty styles into which all presently known Rock Art has been tentatively classified. The chart of Wakankar has been modified by this writer to include Cave Art. This is because at the advent of the historical period Rock Art merges into Cave Art though both exist side by side. The chronological order is given below (Pictures, page nos. 27,28 and 31,32):

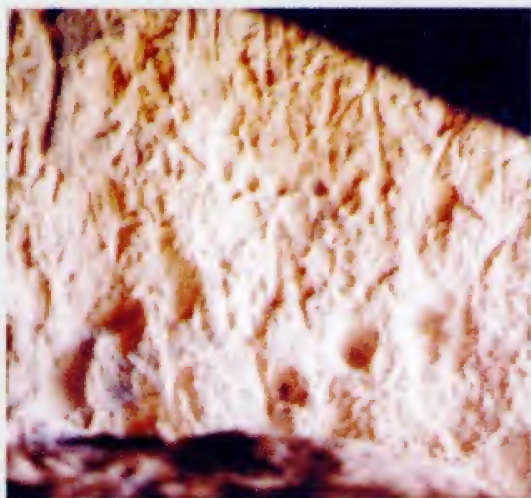
Period I - Mesolithic or earlier

Style 1 Petroglyphs as at *Perumukkal* - carved or scooped out of rock - craters or cupules.

- Style 2 Very faint red outline; large: 14 inches to 6 feet; no humans; buffaloes and bison; Adamgarh, buffalo; Kharvai, bison; Kanwalla, bison, *Vellerikombai*, hill or altar.
- Style 3 Very faint red wash or very heavy red outline; vacant centres, or filled with wide vertical or oblique lines; associated with human hunters; Ghor, rhinoceros; Adamgarh, bison and antelope; *Alambadi*, bird.
- Style 4 Faint red outline with filling following the muscles and viscera; incipient x-ray style; non-geometric; a few human hunters or dancers; Bhopal, Hospital hill, deer and hunters; Raisen, deer; Kharvai, bison; *Keezhvalai*, *Crab*; *Alambadi*, Human beings and animals.
- Style 5 Red or red and white or white outline filled with a great variety of geometric patterns: lines, zigzags, chevrons, triangles, lattices, lozenges, honeycombing, squares and rectangles; many different animals; somewhat realistic; at least 24 locations, but best seen at *Hathi Tol*, *Raisen*.
- Style 6 Geometric and floral designs; thin red or purple outline; associated with animals of style 3 and humans of style 4 and 5; some patterns like huts; *Brahmi* type symbols; Bhimbetka, Edakal, and *Keezhvalai*.

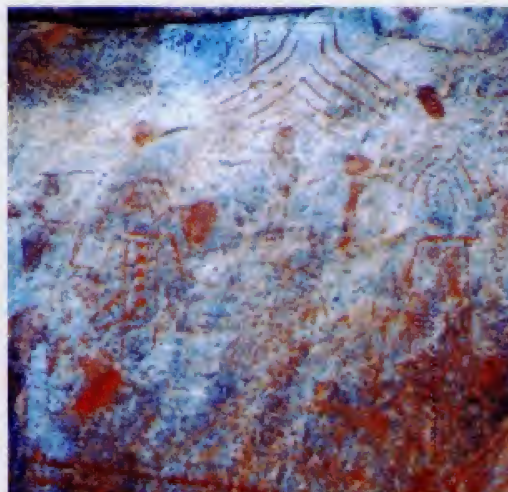
Period II Neolithic/Chalcolithic and early Iron

- Style 7 Simple line drawings in red; antelope, deer, humped cattle, boar, astronomical phenomena, sun, stars, flowers; superimposed by Period III; Bhimbetka, *Alambadi* and *Iduhatti*.



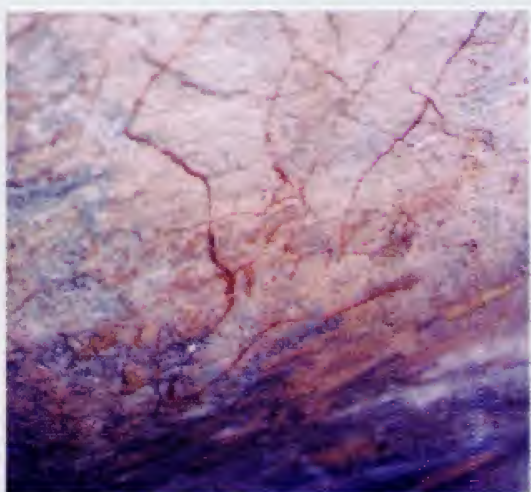
◀ Style 1

Petroglyphs - Cupules
Perumukkal



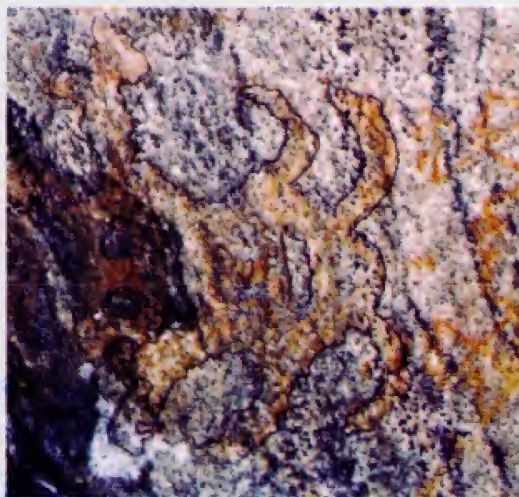
Style 2 ▶

Faint red outline painting
Vellerikombai



◀ Style 3

Red outline filled with vacant centres
Alambadi



Style 4 ▶

Red ochre incipient x-ray style painting
Keezhvalai



◀ Style 5

Red outline paintings with geometric fillings
at *Hathibelikal, Raisen*. (North India)

Style 6 ▶

Geometric and *Brahmi* type symbols
Keezhvalai

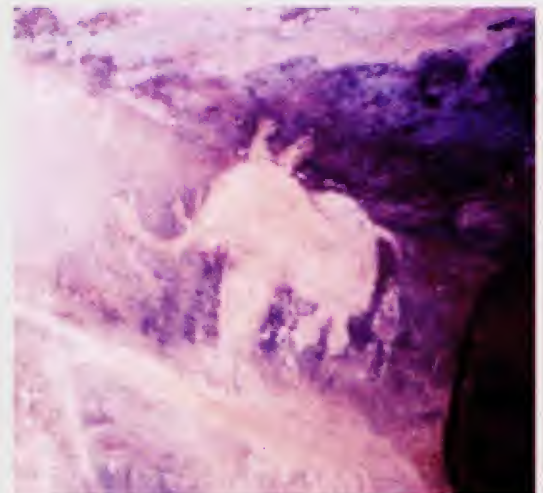


◀ Style 7

Astronomical and floral designs -
red line drawings
Idhatti

Style 8 ▶

Thick white ochre crude drawing
Bhimetka



- Style 8 Thick white ochre as though done with a finger in outline only; many animals crudely drawn and triangular humans; superimposed by Period III paintings; Kharvai, Bhimbetka, *Vellerikombai*.
- Style 9 White or yellowish white or yellow wash without apparent outline; quite realistic and skillfully executed; bulls, horses, camels, humans; Bhimbetka, *Chenrayanpalli*;

Period III Early Historic (300 BC – 800 AD)

- Style 10 Sangam Era symbols in red or white outline, occasionally green or yellow, or white wash; *swastika*, hollow cross, *Trishul* elaborate design; associated with *Brahmi* letters, probably the work of religious recluses from the valley cultures; Bhimbetka, Roup, Narsingharh, Gwalior, *Iduhatti*, *Keezhvalai*.
- Style 11 *Satavahanas* (100 AD – 300 AD)
 Red or white outline paint - red ochre directly on limestone as found in the *Amaravati Stupa* pieces - faint red outer outline alone is seen now. The rest have been obliterated due to passage of time. This is on the bas - relief sculptures and a casket. There are two or three pieces in the *Amaravati* Gallery of the Government Museum, Chennai and in some pieces in the British Museum. Wakankar for this period writes about geometrical patterns: horses, donkeys, horse riders and warriors; similar to pottery designs at Newasa and Navda Todi; found only where Neolithic or Chalcolithic pottery is found; Kharvai, Bhimbetka, Pachmarhi and Bor Rani. This holds good from a North Indian perspective.

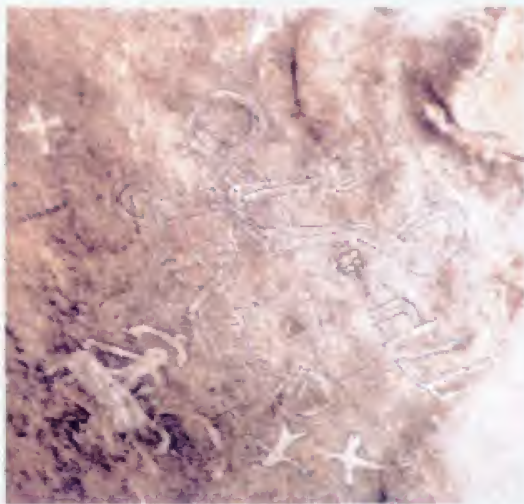
Style 12 Pre- *Pallava* and early *Pallava* (300 AD – 800 AD)

Coating of lime as a base over which red ochre is coated and may be other minerals and decorative patterns; conflicts, scenes of gods, mythological scenes. In *Mahabalipuram*, the *Adivaraha* cave has this type of red ochre paint, but the paint surface has peeled off except in a few areas of the *Adi varaha* at the base near *Adisesha*, who is at the feet of *Varaha*. Only the lime base is seen on the other sculptures in the outer cave. The red ochre and other colours are washed away. There are newer layers of other colours as well since the cave is under worship. The technique used was *fresco-secco* according to Indian scholars, while Europeans consider all these as *tempera*.

Style 13 Multicoloured decorative patterns: white, red and yellow wash; Kohbar, Bhaldaria, Sugdaria (North India).

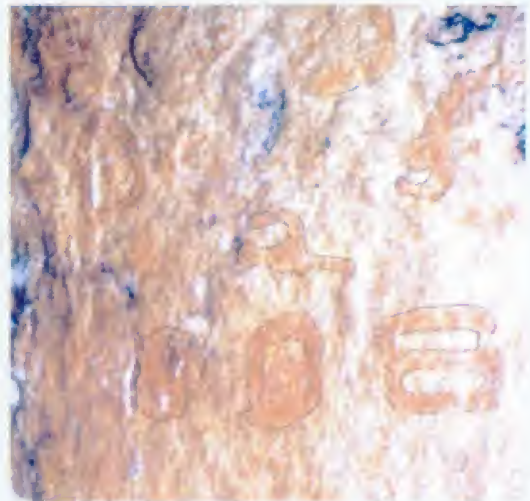
Style 14 Post *Gupta* - *Pallavas* (500 AD-800 AD)

White or red or white and red ochre - drawings of domestic scenes, tribal conflicts, carrying, dancing; often realistic and graceful, with emphasis on human action; Pachmarhi, Bhimbetka etc. This holds good for North India. In South India, Style -12 is the pattern that holds the stage. There is no direct influence of the *Guptas* in the Tamil country. There was cultural intercourse however. This period belongs to the mighty *Pallavas*. The paintings in the *Kailasanatha* Temple at *Kancheepuram* and the *Chattri* at *Panamalai* near *Gingee* in *Villupuram* District testify to the mainstreaming of Rock and Cave Art in the late *Pallava* period. The paintings at



◀ Style 9

White or yellowish white painting of humans and animals
Chenrayanpalli



Style 10 ▶

Symbol of Trishul like painting
Iduhatti

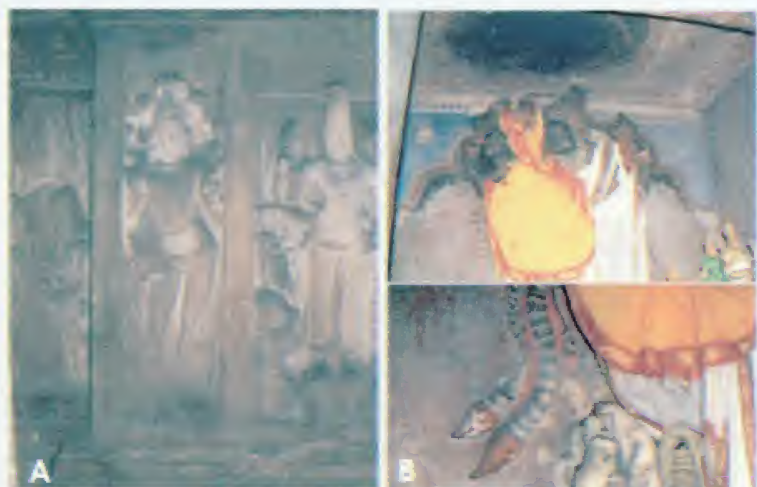


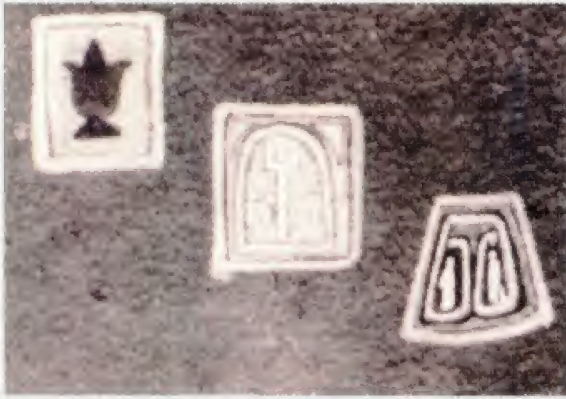
◀ Style 11

Red ochre painting on a sculpture -
Amaravati Gallery, Government Museum, Chennai

Style 12 ▶

- A. Lime base alone seen of what must have been a red ochre painting.
- B. Red ochre painting at Adivaraha cave, Mahabalipuram





◀ Style 13

Multicolour painting
Kohbar, Bhaldaria, Sugdaria (North India)



Style 14 ▶

Painting at *Kailasanatha Temple*
Kancheepuram



◀ Style 15

Cave paintings with Vegetable mineral dyes
Sittannavasal

Style 16 ▶

Multi colour Painting - Vegetable
and mineral dyes
Varadarajaswamy Temple
Kancheepuram



Kailasanatha Temple though damaged show clearly that the thesis enunciated regarding the *Adivaraha* cave is true. The paintings are on sculptures. There is a lime base over which exquisite colour paintings are made with vegetable and/or mineral dyes.

Period IV Medieval (800 AD- 1300 AD)

Style 15 Cave paintings with Vegetable and/or mineral dyes - *Sittannavasal* cave paintings, Chola period paintings in the Big Temple, *Thanjavur*, paintings in the *Jain* caves/temples at *Tirumalai* Hill (Tiruvannamalai District) etc.,

Period V Post 1300 AD - Post Medieval

Style 16 Paintings in temples and places like the *Jain* caves at *Tirumalai* (Tiruvannamalai District), *Vijaynagar* and *Naik* period paintings in temples like the *Thyagaraja* temple, *Tiruvarur*, Tiruvarur District, *Varadarajaswamy* temple, *Kancheepuram* etc. The examples are too numerous for all to be mentioned here. Vegetable and mineral dyes - pictures of gods, courts of kings, fights, mythological scenes etc are depicted. *Tirumalai* has a continuing tradition of cave paintings and therefore figures in two time periods.

DATING THE STYLES:

Period I Mesolithic or earlier

There is a distinct possibility that this may turn out to be too conservative. Styles 1 to 4 and the drawings in green pigment may be upper Palaeolithic.

Period II Neolithic/Chalcolithic, early Iron

In Period II problems of both absolute and relative dating occur. The end of the period is securely anchored in historic fact and all of the styles of Period II are superimposed by paintings of Period III. But, this does not help in fixing the beginning of Period II. For this, we are largely dependent upon parallels between Rock Shelter paintings and datable decorated pottery. There are striking similarities between styles 5 and 7 shelter paintings and early Chalcolithic pottery. Independent dating is being ~~tried~~ out now. It is assumed that the paintings occurred before the more conventionalised pottery decoration because the wild ~~animals~~ shown in the shelter ~~ter~~ depictions were closer to the ~~lives~~ of the shelter dwellers than to the pottery makers.

Period III, IV and V - Early historic, medieval and - post medieval

1. The absolute dating of the styles within these three periods is relatively certain because much of the subject matter can be associated with historical facts.
2. These styles contain subject matter extraneous to the lives of cave shelter dwellers. This is because civilisation takes over. Mainstreaming is almost complete except in hills like the Nilgiris.
3. The tradition of Rock Art is continued by the tribals like *Kurumbas* of the Nilgiris who rub out the earlier painting and repaint or add new paintings of red or white ochre in sites near their habitations like *Iduhatti* etc. They do this on their festival days every year. This is a replication of the past but the motifs show up their recent origin, though some accurate reproductions of the past are also seen.

4. Rock Art coexists with the more highly stylised Cave Art. This is common in Indian civilisation, where everyone gets his own space side- by -side with the space of others. This is due to successive waves of people who have settled this ancient land.
5. The above approach integrates the two hitherto separate art forms of Rock and Cave Art. With this holistic approach to Rock and Cave Art, Rock Art gets fused into Cave Art made with vegetable and mineral dyes. It then evolves into the highly artistic temple paintings. The Rock Art stream exists even today among the *Kurumba* tribals of the Nilgiris as seen above. The two seemingly separate streams integrate into one grand continuum from pre-history till the present. This pioneering holistic approach has been used even earlier in the Monograph on Dating in History especially Ancient History (Kannan, Dr., R., 2000 AD).

SUPERIMPOSITIONS IN ROCK ART

In many Rock Shelter sites, all over the world, a limited space has been used for painting over and over again for centuries, as stated above. The painted surfaces of Rock Art, in this way, were used several times by subsequent artists without erasing the earlier ones. In this process, the later depictions are often found to cover but do not entirely conceal the earlier ones. Thus, the earlier depictions get overlapped or have been superimposed on by the later ones. However, it should be borne in mind that such superimpositions always belong to different periods, as superimpositions are laid on the same depiction intentionally.

In the majority of the Rock Art sites, the earlier Rock Art has been successfully superimposed several times on those underneath, leaving such a

confused tangle of images that it takes a lot of time to sort them out into separate individual figures. Generally, it is construed that in such overlapping or superimpositions the paintings of the later phases overlapping or superimposing the older ones are younger. Thus, the antiquity of Rock Art can be assigned and dates can be ascertained positively. *Vellerikombai* has such a pattern.

Superimpositions of Rock Art are of mainly two types. In the first type, both the underlying figures are similar in colour and composition. And in the second type, the underlying and overlapping paintings can be distinguished either due to the difference in the shade of the colour or in style or in both. On the basis of superimpositions, various stages of Rock and Cave Art tradition can be worked out as:

- (i) Naturalistic depictions
- (ii) Stylistic depictions,
- (iii) Symbolic depictions, and again
- (iv) Naturalistic depictions.

This sort of cyclic evolution is not a peculiar feature of the Rock and Cave Art tradition. The study of superimpositions is extremely important to form a clear idea of the process of evolution in style as well as the evolution of concept in different periods. Accordingly, the superimpositions in one Rock Shelter can be linked with those of another in a complete sequence. For instance, if Rock Shelter A has style 2 superimposed on style 1 and style 3 on style 2, while Rock Shelter B has style 4 superimposed on style 3, and style 5 on style 4 and Rock Shelter C has style 6 superimposed on style 5, and style 7 on style 6, a complete temporal sequence can be established from style 1 to style 7. By this method, 'relative dates' can be established with

certainty. In this manner, a large sample of the superimpositions that reveal the relative dates of the styles could be mapped. Although this technique provides only relative dates it is construed as an important prerequisite in establishing approximate absolute dates. The classification of superimpositions is shown later.

DETERIORATION OF ROCK ART

Quite a large number of Rock Art sites are under constant threat of being wiped out forever due to change in the environmental conditions and increase in human activities. Many Rock Art sites have faded as a result of impairment of the pigments due to prolonged exposure to sun, wind and rain. Further, the Rock Art surface has spoiled and flaked away from extensive weathering. In many Rock Art sites, the painted rock surface shows acute stains due to the deposition of clayey and siliceous materials found in the water flowing over the Rock Shelter. Patination of rock surfaces is also observed at many sites. Many Rock Art surfaces are seen overgrown with microbes such as algae and lichens. Human vandalism such as unscrupulous scribbling has defaced these art works of great archaeological value.

SUGGESTED CONSERVATION MEASURES

The conservation treatment of Rock Art varies from place to place depending upon the condition of the rock. In general, the following steps may be taken to preserve the Rock Art for posterity:

- (i) General cleaning and removal of dust,
- (ii) Removal of microbial growth,
- (iii) Consolidation and application of surface coating and
- (iv) Application of silicon drip line over the rock elevations (to divert the course of water over the Rock Art).

Cleaning may be done with solvents such as toluene, methanol, acetone, ethoxy ethanol, diethyl ether, ethyl methyl ketone and ethylene glycol. The sooty accretions may be eliminated by using triethanolamine ethyl alcohol mixture in the ration of 1:20. Microbial growths such as algae, lichens etc., may be eradicated by using aqueous ammonia. If there are stains, they may be removed with the help of hydrogen peroxide. The weakened Rock Art may be consolidated with the help of 5% solution of poly vinyl acetate in acetone or toluene. In the case of Cave Art, (iii) and (iv) above may not apply. Use of chemicals must be avoided and if at all applied should be site specific.

DATING OF ROCK ART

Rock Art is dated more precisely by employing various scientific dating methods as follows:

- I. Micro-erosion Dating Method (by studying directly the micro-erosion involved in rock),
- ii. Lichenometry Dating Method (by measuring directly the lichen overgrowth on rock),
- iii. Radio - Carbon Dating Method (by correlating directly the various results of Carbon - 14 Dating of the microbial growths collected at various layers of Rock Art) and
- iv. Luminescence Radio-active Dating Method (by testing directly the mineral accretions removed from the Rock Art)

In the absence of any such direct dating method, indirect methods of dating are usually adopted in the study of Rock Art. Consequently, provisional dating can be used based on the superimposition of the Rock Art, on the study of thematic evolution, on colour mutations and calcareous deposits. Further, the colour, the texture, the provenance, the technique of manufacture, glazing

and decoration of the pottery fragments discovered in the trenches dug in the floors of the Rock Shelters as well yield some conclusions about the date of the Rock Art. The Rock Art / Cave Art of the historic period is dated by making a comparative study with sculptures and association of the Rock Art / Cave Art with inscriptions.

V.S.Wakankar proposes four possible approaches of dating the Rock Art as given below:

- I. Analysis of the present physical condition of the Rock Art,
- II. Classification of successive superimpositions of different painting styles upon each other,
- III. Correlation of the subject matter of Rock Art / Cave Art with already known period of pre-history, or known dates within the historical periods and
- IV. Correlation of datable materials found in excavations with the subjects, styles and colours of Rock Art / Cave Art on the walls or ceilings of excavated Rock Shelters.

I. PHYSICAL CONDITION

- Blurring** Mineral pigments when applied to a porous rock surface, the pigments form a bond with the rock, which cannot be washed off and can only be removed by grinding or sandblasting. However, at times the sharp lines of the brush become blurred as the pigment is blotted by the rock surface.
- Encrustation** Water coming out of by the rock or dripping on it carries soluble chemicals, which gradually form a crust over the painting as the water evaporates.

- Patination** A chemical, or in some cases a biological change darkens a freshly painted surface, even under desert conditions.
- Erosion** The impact of wind-driven rain or sand upon a Rock Art site grinds away both the pigment and the surface leaving the Rock Art barely discernible after long scrutiny.

These four physical changes help to a limited extent in assigning relative dates to the Rock Art. For instance, a very faint, much blurred, heavily patinated or encrusted Rock Art could be crudely dated as older than a vivid and sharply defined Rock Art. But, the rates at which all four changes occur depend upon several variables such as the porosity of the rock, the amplitude of daily and seasonal temperature changes, the degree of exposure to sun, wind, rain and sandblasting and the direction of flow of either internal or surface moisture upon or within the rock. These variables are so significant that it is not uncommon to find a Rock Art site that is bright and sharp at one end but completely obliterated at the other. Further, the flaking of small chips from the rock, as a result of frequent sharp changes in temperature, may ruin a recent Rock Art site while an older Rock Art site nearby is better preserved as it is always in the shade.

Nevertheless, after taking all these variables into account, it is often possible to say that one Rock Art site is 'obviously' older or later than another.

II. CLASSIFICATION OF SUPERIMPOSITIONS

In many locations all over the world a very limited space has been used for depicting Rock Art over and over again for centuries. The later depictions often cover, but do not entirely conceal the earlier ones. Never in one Rock Shelter is there a complete sequence of all the possible styles from the earliest to the latest. The superimposition in one Rock Shelter can be linked with those

of another in a complete sequence. We have already seen the sequence earlier when dealing with superimposition in Rock Art, which also gives dating. The case of Cave Art is also similar. For example Naik period paintings in the Big Temple, Thanjavur are superimposed on earlier Chola period paintings. Similarly, in *Sittannanvasal*, the pre-Pandya paintings and Pandya paintings of the 9th century are seen.

III. CORRELATION BETWEEN THE SUBJECT MATTER OF ROCK ART AND ALREADY KNOWN PRE-HISTORIC PERIODS OR HISTORIC DATES

The most striking illustration of this approach occurs in the many Rock Art / Cave Art sites, which show weapons used during a particular pre-historic period. In the same way, wherever there are engraved or painted inscriptions that can be read, translated and assigned to the period in which the script in question was widely used or the inscription states, the historic period can be ascertained.

IV. EXCAVATION

In some locations, there are good sites for careful digs in accordance with precise archaeological techniques. During the past, excavations have been undertaken in such Rock Shelters. Most of these digs have exposed successive layers of soil and debris giving evidence of intermittent human habitation. Apart from finds such as stone, bone, terracotta and metal objects, stone tools and pieces of haematite have also been unearthed in these excavations. The technique of Carbon - 14 dating is useful for dates that go back up to a limit of 70,000 years with a small percentage margin of error. Since this method of dating can only be applied to organic materials and the pigments used in the Rock Art are all inorganic, the technique cannot be directly applied to the pigments. However, some of the successive layers disclosed by excavation contain carboniferous material, which can be dated - the fragment of pigment or a pigment-grinding stone and the date of the Rock Art can be inferred

from the date of the layer in which the evidence was found. Due to atomic tests carbon dating can also give erroneous results. For further reading on Dating, please refer to the book by Dr.R.Kannan Ph.D., I.A.S. on 'A Holistic Method of Dating in Ancient History especially Indian History' published by the Government Museum, Chennai in 2000 AD.

The latest method of independent dating is measuring dates by changes in the earth's magnetic field. This is based on the theory that the present North and South Poles had interchanged in certain periods in the past. Based on this in the recent *Athirambakkam* excavations of stone tools (2002 AD), the site has been dated as far back as 500,000 years by Dr. Shanti Pappu of the Sharma Institute of Pune. This is based on the opinion of French scientists.

Further, excavations in the upper layers of painted Rock Shelters produced broken pieces of pottery. They can definitely be associated with specific periods of pre-history extending from several centuries before the Indus Valley Civilisation to the beginning of historic periods.

There are many locations in North and Central India where pottery with decorative designs very similar to Rock Shelter art has been found. The approximate dates of these specimens of pottery have been well established. Although it is possible that the Rock Shelter dwellers copied their depictions from pottery designs, there are two reasons for believing that the reverse process is more likely. First, the pottery designs are more abstract and conventionalised than the Rock Shelter art. Second, the movement of people was from the hunting-and-gathering culture of the Rock Shelter toward the settled agriculture of the floodplains and arable plateaus. To the extent that there are parallels between the art forms it seems likely that the Rock Shelter art was the earlier of the two.

SIGNIFICANCE OF ROCK ART STUDIES

Rock Art is intimately associated with the oral tradition and belief system of the people, which includes their world-views, religious expressions, ideas as well as

mythologies. Consequently, Rock Art not only provides an unmistakable view on the relationship with economic resources, technological achievements, ideology and social activities in various periods of cultural heritage but also that their studies immensely contribute to the overall understanding of the past and how this past has shaped the present and is likely to influence the future. Such an incredibly rich and ancient tapestry of artistic and aesthetic sophistication provides an inkling of the complexity of the society they record.

Further, through their common characteristics, Rock Art demonstrates the unity of the human spirit and thereby contributes to mutual understanding and to the elimination of racist stereotypes throughout the world.

In addition, Rock Art can provide precious information for the advancement of knowledge in various disciplines. These are :-

For example, Human geography, in terms of mankind's relationship to different environments, its economic resources and technology, ideology and social activities;

Art history, by revealing archetypal forms of world-view, religious expressions, mythologies; and

Palaeo-ecology through the depiction of animal species, which, together with other evidence, permits the reconstruction of past environmental conditions.

CAVE ART

MAHABALIPURAM

Tamilnadu stretches from lower Andhra Pradesh to the tip of *Kanyakumari*. Its lands are watered by the *Pennaiyar*, the *Kaveri*, the *Noyyal*, the *Amaravati* and other rivers which flow down from the Western Ghats to the Bay of Bengal. India abounds in artistic and religious monuments, but *Mahabalipuram* (*Mamallapuram*) in Tamilnadu is exceptional. The road leading to *Mahabalipuram* has a beautiful landscape, made up mainly of coconut and palm trees, small shrines and little tanks. It takes in part of Covelong (*Kovalam*), where Lord Clive once fought, *Tiruvidadai*, where there is a lovely *Chola* temple set in a grove of trees and *Saluvankuppam* which, in the olden days, was a part of *Mahabalipuram*, but is now a sandy waste land with two cave temples.

Mahabalipuram began its existence as a port more than two thousand years ago. In the seventh century AD, the *Pallava* kings of *Kanchipuram*, about forty miles to the east, developed it as a port of the *Pallava* Empire. It continued as a harbour, and history records at least two *Pallava* armadas that set forth from it to conquer Ceylon. What is unrecorded are countless emigrant ships which carried Hindu culture and civilisation to what are now Indonesia and Indo-China.

The *Pallavas* appear in South Indian History about 275 AD as ruling from *Kanchipuram*. *Mahabalipuram* enters *Pallava* annals in the reign of the first *Mahendravarman*. His father, *Simhavishnu* (580-600 AD) is the earliest *Pallava* of whom anything definite is known. *Mahendravarman* (600-630 AD) was a remarkable personality, one of the most striking in the history of ancient India. He was a dramatist, a musician, an artist and above all keenly interested in spiritual pursuits. He created carved rock architecture in South India for

the first time at *Mandagapattu*, near Gingee, Villupuram District. An inscription attests this.

Originally a *Jain*, he became a Hindu under the influence of a great *Saivite* saint, *Appar*. *Mahendra Varman's* son, *Narasimhavarman I* (630-668 AD) is intimately associated with Mahabalipuram. It is his surname, 'Mamalla' or the 'great wrestler' that was given to the port town. *Mamallapuram* later became to be called *Mahabalipuram*. Now, the old name has been revived in Tamil.

The art of Mahabalipuram

Mahabalipuram appeals to all kinds of people. Its picturesque location on the coast with one of the monuments, the shore temple, directly buffeted by the waves, appeals to our imagination. It also attracts sea and beach lovers. *Mahabalipuram* art has been influenced by three traditions. The first is indigenous *Sangam* Tamil literature of the period circa 2nd Century BC to 2nd Century AD (based on the dating adopted by 20th Century British School Indian scholars). It preserves in stone the descriptions of the attractive architecture and sculpture, contemporary to that period. The second is the art of the *Amaravati* school, (circa 2nd Century AD, at present in the Andhra region, near *Guntur*) which has particularly influenced the bas-relief sculptures portraying scenes from the *Puranas* (Hindu mythology). The third a distant one, is *Gupta* art which filled with its fragrance, the whole of India from about the fourth to the sixth centuries AD. The monuments of *Mahabalipuram* like the 'Cave' temples, 'Cut out' temples called Five *Rathas* (chariots) and bas-reliefs (*Arjuna's* Penance) on rock surface are noteworthy. They are of four kinds. 'Cut-in' caves and bas-reliefs in the caves (*Varaha Mantapa*) are the first kind. The *Rathas* i.e. the 2nd category viz, 'Cut-out' can also be classified as open air monoliths. The 3rd category are open air bas-relief panels (*Arjuna's* Penance etc) and the last are the structural temples

(e.g. the shore temple). The second and third are unique to *Mahabalipuram*. The *Mahabalipuram* 'Cave' temples are among the earliest of their kind in Southern India.

CAVE TEMPLES

One of the earliest temples to be excavated in the Tamil country is at *Mandagapattu*. Its creator, *Mahendravarman I* claims to be the first to have avoided the use of materials like brick, timber, metal and mortar while building a temple (vide his inscription found there). This suggests that earlier shrines in South India of which Tamil literature says there were many, were made of these materials and they have all disappeared due to efflux of time or been superimposed.

The cave temples have pillared halls with the *cella* (sanctum-sanctorum i.e. *Garbha - Griha*) or cellas excavated in the back wall. These halls called *Mandapas* face the East or the West. Most halls are divided into two sections by an intermediate row of pillars and pilasters. Figure sculptures are scanty, but invariably two door-keepers called *Dvarapalakas* guard the shrine. In some monuments these figures are carved on either side of the façade. Inscriptions are found in many monuments. There are nine principal rock temples at Mahabalipuram, excavated on the East and West faces of the hill. They range from rather simple looking examples like the *Dharamaraja mandapa* to the ornate and well developed masterpieces like the *Mahishasuramardini*, the *Varaha* and the *Adivaraha* temples.

The *Mahabalipuram* caves have superb sculptures. In the *Mahishasuramardini* cave, there are two, on opposite walls, showing Lord *Vishnu* in His cosmic sleep (*Ananta Sayana*) and Goddess *Durga* fighting a demon. Lord *Vishnu* displays profound peace in his facial expression while Goddess *Durga* is shown with the energy characteristic of a warrior. She is contemptuously indifferent to the menacing expression of the demon

which they loved. Though not so big as its neighbour, it is nevertheless substantial in size. The story is that of Lord *Krishna* protecting the good people of *Vrindavan* from the hail and storm let loose by *Indra*. He does so by interposing a mountain between them and the heavens called '*Govardhanagiri*'.

ANANTASAYANA PANEL AT MAHABALIPURAM

The scene portrays Lord *Mahavishnu* at the time of creation (Photos, page no.51). According to the story, *Brahma* is seated on a lotus with two leaves issuing from the navel of *Vishnu* (not shown in the panel). He is creating the world. The three *gunas* (types of qualities) *Satwa*, *Rajas* and *Tamas* - the first godly and the latter two symbolising human frailties also get created. *Rajas* and *Tamas* (symbolised as the demons, *Madhu* and *Kaitabha*) emanate from the ears of *Mahavishnu* (Zimmer, 2001, pp. 12-13). They are the two large standing figures looking menacingly at *Vishnu* in this panel. They are standing at his feet. When they were about to devour *Brahma*, they were slain by *Mahavishnu*. Another version is that by shaking the lotus stem on which *Brahma* sits they made the *Vedas* to fall down into the sea, from which the *Vedas* were rescued by Lord *Mahavishnu* in his form of *Hayagriva* (theri-anthropomorphic form of a human with a horse's head).

In this panel, Goddess *Bhudevi* is at his feet worshipping him - since it is creation time. In Iconography, Goddess *Sridevi* is shown at the head, while Goddess *Bhudevi* is always shown at the foot.

The story is narrated in the *Devi Mahatmyam* version of the *Markandeya Purana* according to one school of thought and *Vishnupurana* according to another. The two figures at the side of the coils of *Adishesha* are the *Rishis Markandeya* and *Bhrigu* according to earlier writers. However, the writer had a close look. (See inset close up view photograph).

The head gear of one is like that of a royal personage and that of the other is a *jata*, characteristic of a *Rishi*. Therefore, the duo appear to be *Varuna*, the *Deva* (celestial) responsible for water and *Rishi Markandeya*. *Varuna* has been identified by the waves flowing at his waist, the pearls and *Shankha* (conch) in his garland. These are associated with the sea and therefore water.

The two flying figures symbolise the Conch-*Panchajanya* (Demon *Panchajanya* subdued) the male figure and the mace (*gada*) personified as *Kaumodaki* (feminine figure) (Soundar Rajan, K.V., 1983, pp. 136-137). Some feel that the episode involves *Yoganidra* (*Vishnu* in a trance like state but with full awareness of what is going on) and *Yogamaya*, (this is the power of God in the creation personified as a Deity - i.e. the world is an illusion, which appears real to all living beings) who are symbolised as the two small flying figures overhead of *Vishnu*.

Those who do not have the time to visit *Mahabalipuram* can enjoy it in the Government Museum, Chennai. For others, it is a curtain raiser to what *Mahabalipuram* offers.

During my recent visit to Bhopal, I visited the *Udayagiri* caves at *Vidisha*, near *Sanchi* (60 Kilometres from Bhopal). I came across caves and cave temples of the *Gupta* Era. There are exquisite carved bas-reliefs as well. The cave temples have idols of *Parshvanatha* (identified by the seven headed snake canopy) and other *Jain Tirthankaras*. The bas-reliefs have Hindu themes. These are dated to circa 4th-5th Century AD. These bas-reliefs appear like the *Mahabalipuram* cave carvings. The rock temples are like the temples at *Mahabalipuram* but there are structural temples also. In one panel, there is a *Seshasayee* bas-relief panel as in *Mahabalipuram*. Lord *Vishnu* reclines on his serpent bed (*Adishesha*). The coils of the serpent are portrayed as being massive. The milky ocean is portrayed as waves carved on the rock, which stretches right

Mahisha fighting with her. In the *Varaha* cave, there are four sculptures. One of them, depicting the story of *Bali*, provides the only connection with the popular name of the site. In the *Adivaraha* temple (the only one of its kind under worship today) also, there are sculptures.

Most of the shrines in Mahabalipuram are dedicated to Lord *Siva*. The object of worship appears to have been *Somaskanda*, a form which shows *Siva* and *Parvati* with their child *Skanda*. One of the temples is dedicated to Goddess *Durga*, a popular divinity in *Pallava* times. Her sculptures are to be seen in many monuments. Another temple has idols of Lord *Siva*, Lord *Vishnu* and Lord *Subrahmanya* together in one place.

BAS-RELIEFS

Those who visit *Mahabalipuram* cannot miss the bas relief sculpture 'Arjuna's Penance'. On a rock surface facing the east with a fissure about its middle, have been carved about a hundred celestials, human beings and animals. The centre of attraction is the fissure, towards which everybody and everything is looking. On the top row celestial personages are shown effortlessly flying towards the crevice. In the lower portions some of the most majestic elephants Indian Art has created are depicted ambling towards the same destination. A few lions, deer, monkeys and a cat (the feline providing unexpected humour) are also shown.

In the southern section of the huge sculpture, a drama is being enacted. Near the top stands a majestic God. Nearby is an ascetic practicing severe penance, in this case standing on his toe. A little below, an emaciated personage is seated near a little shrine of Lord *Vishnu*. People performing religious rites on river banks are shown further below. This was a familiar scene in South Indian villages till circa 1960 AD. It is rare now. *Pallava* understanding of animal and human life is exhibited here.

In another composition the artists have depicted a story from the epics

up to the place where the viewer stands in the pathway to the panel. *Brahma* emerges from his navel. *Brahma* is seated on a lotus. At the feet of Lord *Vishnu* at the sides of the coils of *Adishesha*, *Bhudevi* is portrayed with her hands folded in prayer (*anjali mudra*). Above *Vishnu*'s head, some figures are portrayed. They can be identified as *Devas*, and Sage *Markandeya*. *Yogamaya* and *Yoganidra* are portrayed as two small figures. The weapons (*ayudha purushas*) are also personified and depicted. At his feet above the coils of *Adishesha*, *Madhu* and *Kaitabha* are seen. This panel, since it ante- dates by common consensus the circa 7th-8th Century AD *Pallava* carvings at *Mahabalipuram*, shows the flow of ideas and may be sculptors from Central India and the *Gupta* Empire to the next mighty empire viz. the *Pallava* Empire. There are also important differences in the portrayal of the facial and other features. These conform to the *Gupta* idiom. The personages depicted in the panel are also not fully the same. The *Rishis* are not depicted below the coils of *Adishesha* as at *Mahabalipuram*. This shows the process of adoption and adaptation of ideas to the local situation and also the different time period, which is commonly observed in history.

MAHABALIPURAM



◀ (Inset) *Panchajanya and Kaumodaki*

Anantasayana Panel at Mahabalipuram



(Inset) *Varuna Deva and Rishi Markandeya*



(Inset) *Goddess Bhudevi*

TIRUMALAI



1

Dwarapalaka - painting



2

Floral paintings

Tirthankara sculpture ▶



3



4

◀ *Bahubali
(bas - relief sculpture)*

*Yakshi Ambika
(bas - relief sculpture) ▶*



5

TIRUMALAI

This important *Jain* centre situated in Polur taluk, Tiruvannamalai District contains on the top of the hillock, at the middle level (in the form of caverns) and at the foot (in the form of two structural temples) one of the richest treasures of historical and art materials, by way of records, carvings and paintings of *Jainism*, dating from the *Rashtrakuta* times circa 8th - 9th century AD to the late *Vijayanagar* period (16th century AD). The hill is called *Vaigaimalai*, presumably from the name *Vaigavur* given to the *Jain* village at the foot of the hill.

This settlement started from the time of the *Chola* King, *Rajaraja* I. Even works like that of building a sluice to the tank nearby were done during the time of *Rajaraja* I (*Chola* 985-1014 AD), by a certain *Gunaviramamunivan*, and was named after his teacher *Ganisekhara maru-porchurian* (the second golden *Surya Ganisekhara*). Another record of the time of *Rajendra Chola* (1014 - 1044 AD) in his 12th regnal year records a gift to the temple at the top of the hill which it mentions by the name '*Tirumalai*' and this temple on top is called *Kundavai Jinalaya*, apparently named after *Raja-Raja*'s daughter, and thus of his time itself (even if it stands for *Rajaraja*'s own elder sister of the same name). The record of *Rajendra*'s period informs that *Chamundabbe*, the wife of a merchant *Nannappayan* living in *Perumbanappadi*, gave a perpetual lamp to this temple on the hill top and also grant for sacred food. Another, also in the 12th regnal year of *Rajendra*, refers to the gift of a lamp by one *Ilayamani Nangai* and the lord of the temple is called *Arambhanandin*. Money was endowed for the lamp by one *Sinnavvai*, a queen of a *Pallava* king.

A record on the wall of a *mandapa* at the base of the *Tirumalai* hill, dated in the tenth year (1344 AD) of *Ko-Maravarman Tribhuvanachakravartin Vira Pandya Deva* (Year of Accession -1334 AD), refers to the building of a

sluice at this place from the *Madageri* tank by one *Ambala Perumal* or *Sinattarayan*, a headman. A record of the twelfth regnal year of *Rajanarayana Sambuvarayan* (1156-1174 AD) mentions the setting up of a *Jain* image on the hill by one *Nallattal*, daughter of *Mannai Ponnadai* of *Ponnur* for *Viharanayanar Penneyilnathan* (synonymous for *arhat* i.e. an enlightened *Jain* saint just before he sheds his mortal body). A small record on the lower temple *mandapa* refers to the gift of a well for water by the sons of *Idaiyaran Appan* as an act of piety so that merit could accrue to one *Sirrinangai*. A long inscription dated *Saka* 1296 (1228 AD) in the reign of *Ommana Udayar*, son of *Kambana-Udayar* forms a registration receipt for a gift of land for the temple, bought by one *Visnu Kambuli Nayakar*. This receipt is given by the people of the village for which the land was bought. They are represented by one *Ankarai Sridhara-Bhatta*.

A record in a small shrine below the painted cave refers to the image of a *Yakshi* {female attendant deity of a *Jain Tirthankara* (one of the 24 chief saints of *Jainism*)}. This *Yakshi* is also seen there. The image has been caused to be made by one *Aristhanemi Acharyan* of *Kodaikottur* and a pupil of *Paravadimallan* of *Tirumalai*. An interesting record on the outer wall of the doorway leading to the painted cave refers to gifts made by one *Vyamukka-sravanojvala* or (in Tamil) *Vidukaadazhagiya-perumal* alias *Atigaiman* of the *Chera* race, with his capital at *Takata* (*Tagadur*, present *Dharmapuri* district), who was the son of *Rajaraja* and descendant of a certain *Yavanika* (*Erini*) king of *Vaigai* (i.e. the village as seen above). This king repaired the images of a *Yaksha* and *Yakshi* made by *Yavanika* and placed them on the hill and presented a gong and constructed a channel. The hill here is called *Arhasugiri* (*Engunavira Tirumalai*).

The other pieces of art on the hill (*Tirumalai*) comprise a large monolithic image of *Neminatha* on the hill top and a series of caverns

converted into abodes, with paintings of various geometrical and other designs, besides *Samavasravana* (auditorium for *Jain* saints delivering their enlightenment sermon) scenes. Besides these, one of the two structural temples, with an intact *gopura* (temple tower) entrance, at the lowest length, has painted panel scenes displayed in the sanctum on the drum-like circular zone above the wall proper and at the base of the *sikhara* (apex) shell. These two temples are dedicated to *Vardhamana* and *Neminatha* (both *Tirthankaras*) respectively. Their *vimanas* (tower over the sanctum) are typical southern *vimana* types of the late *Chola* and early *Vijayanagar* periods respectively. The larger and later *vimana* (i.e. *Vijaynagar*) is on the upper terrace of the hill relatively close to the series of caverns. A large *prakara* (perambulation) wall skirts the whole complex at the foot of the hill. The *Vardhamana* temple rises in *tritala* (three storeys) with a circular *griva* (the portion just below the *shikhara*) and *shikhara* at the top. The interior plan is that of *garbhagraha* (sanctum-sanctorum), *ardhamandapa* (hall at the entrance of the sanctum), *mahamandapa* (great hall), all closed and an open *mukhamandapa* (entrance hall) one leading to the other with a common flat roofed terrace.- (Photos, page no.52).

The *Neminatha* temple has again another *prakara bandha* (outer wall for perambulation) with a *gopura* entrance. The tower of this temple is missing. The *garbhagraha* is square and has an *ardhamandapa* of similar width but the *mahamandapa* is wider. It has an open pillared *mukhamandapa*. The cornices of the *mukhamandapas* of both the temples are massive, with *kodungai* (Tamil for cornice and *kabhotam* in Sanskrit) ribs underneath in typical *Vijayanagar* style. The topmost terrace also carries a small shrine which is attached to the bulge of the rock scarp (slope) here and is in alignment with the cavernous recession containing other caverns. Excavations occur at different levels vertically, with floors

constructed partially and scooped out partially and stair-cases rising three storeys high, with the topmost resting immediately under the horizontally projecting and over hanging rocky bluff. The storeys are characterised by corner (cantoning) pilasters but the top two *talas* (floors) also carry wall pilasters and niche figures of *Ajitanatha* (2nd *Tirthankara*), within a *makara torana* (floral design issuing from the mouth of two crocodiles) niche, flanked by *Maha Yaksha* and *Rohini* (male and female attendant deities). There are two standing elephants carrying garlands on their slightly lifted trunks, against the *varimana* (Tamil for layer) and *vedi* (railing) courses made in appliqué stucco technique. The interior shrines at different levels show rock-cut carvings of the *Chola* and *Vijayanagar* periods. Of these the *Dharmadevi* (the *Yakshi* of *Neminatha*) shrine with *Gomateswara* (son of *Adinatha Tirthankara* and a great *Jain* saint with his two sisters) and two male attendants of the Imperial *Chola* times (11th century AD) deserve attention, although the figure of *Dharmadevi* is itself of the *Vijayanagar* period. The main shrine is, however, for *Neminatha* and is known as the *Araikkoil* (or the covered chambered temple) and is distinguished by extensive *Vijayanagar* and *Nayak* paintings.

In the Rock and Cave Art Gallery at the Government Museum, Chennai, we show a few *Chola* period bas-relief sculptures of *Bahubali* (another name for *Gomateswara*) and paintings of the *Vijaynagar* period. One bas-relief shows *Bahubali* with his two sisters. This will help those who do not have the time or energy to reach the relatively inaccessible village of *Vaigai* or *Vaigavur* and climb the hill to enjoy these works of art.

SITTANNAVASAL

The art of both secular and religious painting was well known in South India long before the Christian era. *Tolkappiyam*, the earliest Tamil literature, refers to the art of painting as being in vogue then. *Sangam* literature which is assigned to the late pre-Christian and early Christian era throws a lot of light on the nature of art and its influence on the social life of the people. The ceilings of temples were decorated with paintings depicting scenes from mythology. Since perishable materials were used for construction of temples and halls before the *Pallava* era (circa 600 AD) no tangible evidence of this period has survived.

The paintings of *Sittannavasal* in the then *Pandya* territory (present Pudukottai district of Tamilnadu), from the time of their discovery, have attracted the attention of the art world. In their form, colour and expression they were so close to *Pallava* art, that scholars attributed them, once to the *Pallava* artists. There is an earlier layer in some portions, which is pre-Pandya over which the Pandya layer has been executed i.e. the carpet design with *Ujjain* symbols is felt to be executed earlier. It was only after the discovery of the *Pandyan* inscription near the cave temple, that it was realised that the paintings were executed under the patronage of the *Pandyan* King, *Sri Mara Srivallabha* (815 -862 AD) in the first half of the ninth century AD. The inscription, which incidentally is in verse, extols the greatness of the *Pandya* and goes on to narrate the religiosity of a *Jain* monk, *Ilam Gautaman*, hailing from Madurai, who enlarged the inner *Mandapa* of the cave and renovated the whole complex. Extensive renovations were made during the reign of *Sri Mara Sri Vallabha*. Therefore, it is certain that the paintings were created under the aegis of the monk.

The paintings are found on the pillars of the outer *mandapa*, on the ceiling of this *mandapa*, and on the ceiling of the inner sanctum. The painting

in the sanctum has only a carpet design. The paintings on the outer side of the pillars carry figures of two dancing girls, which are outstanding portrayals of art. They recreate the swaying movements of the danseuses. The suppleness of the limbs, the glance of the *danseuse*, the rhythm of movement, and the emphasis on *bhava* (facial expression) make these some of the most memorable visions after *Ajanta* and *Bagh* (both in Maharashtra). The limbs in these paintings have become invisible due to the paint having dissolved due to time and natural forces. The basic lines showing the limbs have become visible as the paint has given way. This shows that the artists of the *Pandyas* were aware of the role of lines in paintings.

The most impressive painting, however, found on the ceiling of the front *mandapa*, depicts a lotus pond, depicting a lot of animals, fish and birds. Thiru T.N.Ramachandran, a former curator of this museum (1932, p. 41) gives a vivid description. 'Amidst the lotuses are portrayed various kinds of fish, a *makara* (a type of fish but usually refers to a crocodile), buffaloes, elephants and numerous birds such as geese. In the northwest corner of the tank, two devotees (*bhavyas*) in loin cloth are wading through the water. One carries a basket in one hand and is plucking flowers with the other. The other carries a lotus over his left shoulder, and extends his right hand, with the fingers forming the *mudra* of overture, as though he is beckoning the *bhavya* ahead of him. A third *bhavya* in the southern corner of the tank carries a lily in the right hand and a bundle of lotus flowers in his left hand. Everything is treated in a most natural, elegant and simple manner. The fish and the geese play about in the tank here and there, recalling a pleasant paradise. The elephants wading in the tank are engaged in bathing and splashing water on each other, plucking lotuses by their stalks and so on. The attitude of the third elephant, which is wading in the water tank behind the elephant that is pulling the lotus by its stalk, is suggestive of supreme contentment such as an elephant would feel in water.

It stands still. The lotus leaves are made to stand as background of every lotus flower in bloom to set off the latter and bring out its beauty. Of the three *bhavyas*, whose pose and sweetness of countenance are indeed charming, two stand close to each other while the third stands alone at the right corner of the fresco. The complexion of the two is dark red while that of the third is brown. The splashing elephants are causing consternation to the fish around them, who have started leaping and frolicking. The function of the splashing water is justifiably assigned to the tusker who is evidently the chief of the elephant herd. The artist, however, has not forgotten, to depict the leaping fish with its enviable eye, the eye that makes the poet run home to verify it by comparing it with the eye of a lovely lass (*Minalochani*, *Minakshi*). Of similar interest is the attitude of the buffaloes in two different parts of the lotus tank. One maintains the stone-still pose in water that a buffalo and a buffalo alone can command, while the other is a little bit agitated and has tilted its head in proof thereof. The twisted horns of the buffalo give the dignity due to that animal. By the side of such frolicking fish, splashing elephants, bathing buffaloes and wading devotees, the painter juxtaposes birds such as *Chakravakas* (ruddy geese, a symbol of conjugal love), *Sârasas* (Indian cranes), and the ducks generally in pairs and occasionally single’.

Regarding painting technique, the paintings are painted by *fresco secco* technique. Natural pigments are used. They are usually applied with a twig brush.

The sculpture of the single meditative *Jain* figure in *Sittannavasal* is of a *Jain* saint. We identify him as an *Acharya*, because there is only one parasol above his head. He is a teacher, an evolved soul respected in this world. In the case of *Tirthankaras*, they have three parasols or *Mukkudai*, signifying lordship over the three worlds of earth, heaven and the nether

world. The inscription below it calls the sculpture 'Sri Thiruāsiriyan' (Respected (Sri) in Sanskrit and (Thiru) in Tamil, teacher). The caves were carved for the *Jain* ascetics, who also inhabited them. The three *Tirthankaras* from *Sittannavasal*, Pudukkottai District are depicted as bas-relief sculptures in the Museum Gallery. - (Photos, page no.61).

We see a series of three panels in the Cave Art gallery, Government Museum, Chennai. In the first panel, we see a celestial dancer or *Apsara*. We see *Bavyas* or *Jain* saints in a lotus pond with an elephant in the second. In the next painting, once again we see another celestial dancer or *Apsara*. These *Sittannavasal* paintings can be compared with the *Ajanta* paintings. They are also made of vegetable and mineral dyes. Some of them have been tried to be preserved during the 40s and 50s of the 20th Century AD.

These scenes have been brought to you in the Rock and Cave Art Gallery in 2002 AD from *Sittannavasal* to be seen in *Chennai*. The Museum would like to save you the time, trouble and expense. Also we would like people from all over the world to savour and enjoy this unique piece of art.

SITTANNAVASAL



View of the pillars and beam with paintings



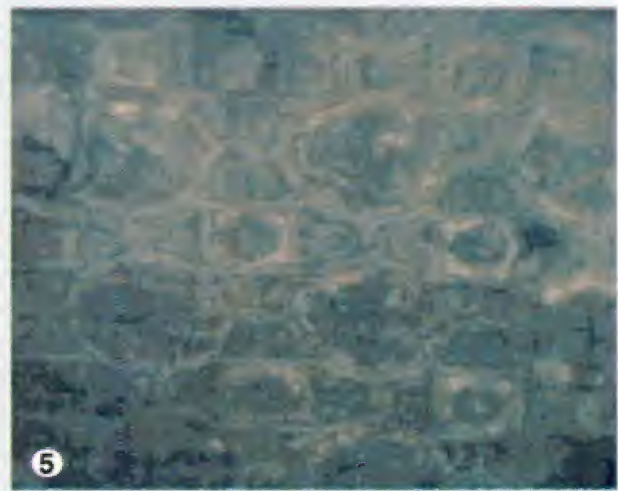
Bavyas in lotus pond (painting)



Portions of paintings



Apsara (painting)



Pre-pandya painting (carpet design with Ujjain symbol 7th century AD.)



A Jain Acharya
(bas-relief sculpture)



Tirthankaras (bas-relief sculptures)

TIRUGOKARNAM



Temple - front view



Sivalinga (sculpture)



Ganesha
(bas - relief sculpture)



Gangadhara
(bas - relief sculpture)



Carvings on the ceiling



Saptamatrikas (bas - relief sculpture)

TIRUGOKARNAM

Brihadambal Temple - Saptamatrikas and Tirugokarnam-Ganesa, Sivalinga and Gangadhareswara

‘The *Sri Brihadambal-Gokarneswara* Temple at *Tirugokarnam* is the most important temple in the town. The rock-cut shrine of *Gokarneswara* belongs to the *Mahendravarman* epoch (600-630 AD) and consists of a cubical cell with a rectangular verandah in front, resembling the cave-temple at *Sittannavasal*. The *linga* is massive and cylindrical. The upper and lower portions of the pillars are cubical, while the middle third is octagonal with the angles bevelled off. Above the pillars are corbels supporting the architrave (main beam resting across the tops of columns). The face of the bracket is curved and bears the usual *Pallava* roll ornaments. The figures of the huge *Ganesa* on the south wall of the *ardhamantapam* and of *Gangadareswara* on the north wall are typical *Pallava* sculptures. On the rock face to the south of the cave are figures of the *Saptamatrikas* (Seven mother Goddesses), *Ganesa* and another God who may be identified as *Veerabhadra*. The *mahamantapam* (big halls) and the other *mantapas* (halls) in front of the central rock-cut shrine belong to the *Chola* and *Pandya* periods. The shrine of *Sri Brahdambal* seems to be a very late structure, probably renovated within the last two centuries. The absence of any inscription on its walls bears out this conclusion. The large *mantapam* in front of the *Amman* shrine, and the corridor leading into the temple from the street belong to the ‘*Madura*’ style. On the pillars of this *mantapam* are figures in high relief of chiefs and nobles who have not yet been satisfactorily identified’ (Venkatrama Iyer K.R., 1944 reprint 2002, pp.980-981).

In the Cave Art Gallery, Government Museum, Chennai we can enter the simulated *Thirugokarnam* cave which is more famously known as the

Brihadambal Temple in Pudukkottai. Goddess *Brihadambal* was the titular deity of the erstwhile royal family. It is partially a rock cut cave temple. In this cave, we have a *Ganesha*. In the next part, the central deity is a *Sivalinga*. The *Linga* in the cubical sanctum is massive and cylindrical. It is one of the oldest *Lingas* of Tamilnadu and assignable to early 8-9th Century AD. The next part from Pudukottai shows *Gangadhara* or *Siva* personified as the person who brings down the Ganges. The Ganges can be seen depicted as a flying angel as is usual in Hindu mythology. She is also seen on top of the head. *Siva* is depicted with four hands, the upper right hand carries the *Damaru* or drum and the upper left hand is just holding his hair lock, which is about to receive the Ganges. The bottom two hands are in the pose of holding the loop of his dress. These exquisite bas-relief carvings are from the 8th or 9th Century AD of the early *Pandya* period. - (Photos, page no.62).

In the last part, we see from left to right *Saptamatrikas* or seven Goddesses, *Veerabhadra* and Lord *Ganesha* from *Tirugokarnam* in *Pudukottai* District. In *Pudukottai* town in the temple of *Brihadambal*, *Veerabhadra* is shown next to Lord *Ganesha*. The seven goddesses counting from *Veerabhadra* are respectively *Brahmi*, *Vaishnavi*, *Maheswari*, *Varahi*, *Indrani*, *Chamunda* and *Koumari*. *Veerabhadra* is a terrifying form of Lord *Siva*.

These panels have been brought to you in this Rock and Cave Art Gallery in 2002 AD from *Tirugokarnam* to be seen in Chennai. This, we hope, would enable people from all over the world who do not have the time to go to Pudukottai to have a glimpse of our ancient art.

COMMENTARY ON SOME ROCK ART AND CAVE ART SITES IN TAMILNADU (SHOWN IN THE TOUCH SCREEN DISPLAY AS VIDEO CLIPS)

We now show video clips of the important places visited by the research team from the Government Museum, *Chennai*. Extensive research and field visits preceded setting up of the Rock Art Gallery in the Government Museum, *Chennai*.

Now you see photos from a video clip of our team members including the Commissioner of Museums Dr.R.Kannan, I.A.S. climbing to the petroglyph site, *Perumukkal* near *Tindivanam*, which is one of the three petroglyph sites in India (Photo nos.1,2, page no.67). The petroglyph is in a cave near the top of the hill. *Perumukkal* also has a temple which dates from the *Chola* period. Construction lasts right up to the post *Vijayanagara* period. Parts of the temple are in need of renovation. The temple itself is not under the protection of the State Department of Archaeology but the petroglyph site is. Professor Madhivanan sees in these petroglyphs, which are made of cupules i.e. scooping out of rock by small rocky stones, figures, which show the *Ramayana*.

This photo takes you to the next site, *Keezhvalai*, 22 km from *Villupuram*(Photo no.3, page no.67). It has a pyramid like entrance made of huge rocky boulders. We see the team members including the Commissioner going through that cave on all fours, because of the inaccessibility of the cave. You see the red ochre Rock Art which is very old and some symbols, the cross symbol closed on both sides, that you see, is supposed to be the forerunner of the Indus valley script (Photo no.4, page no.67). There is a figure on horseback, two people leading the person riding on the horse back.

This photo is a Rock Art site, *Alambadi*, which is a little further from *Keezhvalai* on the same Villupuram Gingee Road (Photo no.5, page no.67). This site is famous for its x-ray paintings, which are supposed to represent a pre-historic anatomy class (Photo no.6, page no.67). The stairs, which you see, are from a modern day temple, which has somehow crept into this protected site. The x-ray paintings are supposed to depict the internal organs of animals and it is felt that some teacher is teaching them to the students. *Charaka* was a great surgeon and *Susruta* was a great physician in India, but they are of the historic period while this Rock Art is from the pre-historic period.

This photo shows *Vellerikombai* Rock Art precipice, which is seen in the far distance (Photo no.1, page no.68). Now it comes into your view. It is in the Nilgiris. Reaching it involved an arduous trek of 14 km for the team. It involved trekking through forest country and the Commissioner is pointing out the distant rock. Two team members nearly died. Here we see the Commissioner of Museums and the team trekking through the thick forest, where there is no path.

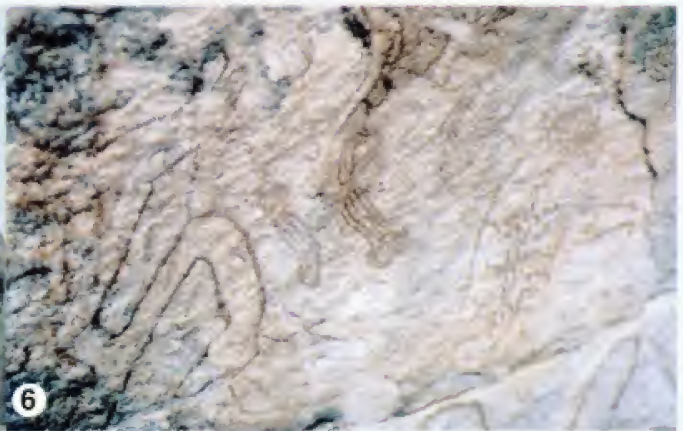
In this photo (Photo no.2a, page no.68), we see an altar for a spiritual sacrifice which is more fully described in the book on 'Holistic Dating' written by Dr.R.Kannan, I.A.S., Commissioner of Museums in 2000. He is pointing out various parts of that drawing here. These are two figures in white ochre. The part in red ochre is from an earlier period than white ochre. This is a shepherd with a staff, which is also shown in our Rock Art Gallery. This is a goat or a ram of the pre-historic period and these are two stars or two human beings depending on one's point of view (Photo no.2b, page no.68). The plus sign, which we see, is the prosperity sign which has again been described in the book by the Commissioner of Museums.



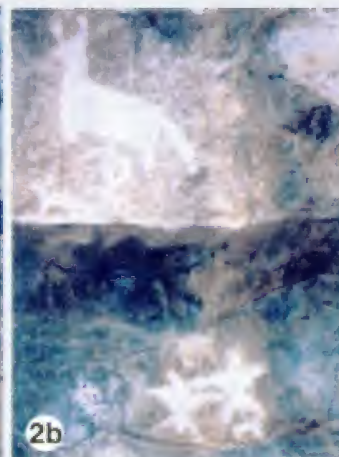
Perumukkal - Petroglyph



Keezhvalai - red ochre - Rock Art



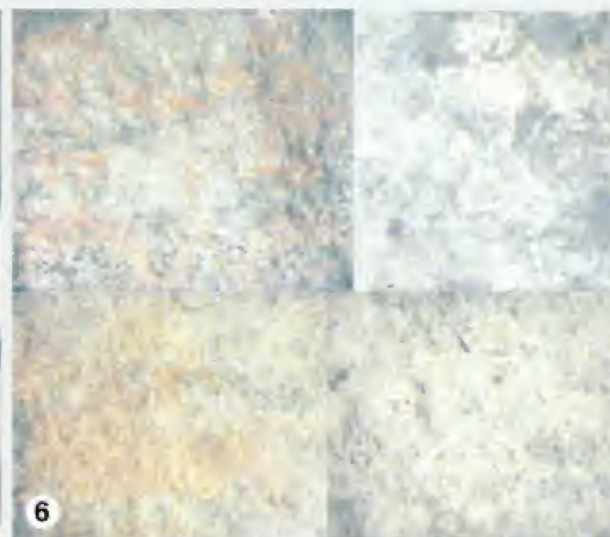
Alambadi - x-ray painting



Vellerikombai - Rock surface - red and white ochre - Rock Art



Iduhatti - red ochre - Rock Art



Gudiyatam - red ochre and white ochre - Rock Art

This photo shows the hill of *Iduhatti* again in the Nilgiris, which was not such a hard trek through forest (Photo no.3, page no.68). This has a Rock Art site. At the base of this mountain, at a sheer drop, we come to the site. We find the team members pointing to the Rock Art. Here the Commissioner is pointing out various Rock Art figures.

This photo is a *Trisul* or three pointed sign which also becomes the sign of the *Saivites* later (Photo no.4, page no.68). We can see people and Lord *Siva* have the *Vibhuti* mark on the forehead even today. This shows that this Rock Art site forms a link with the pre-historic past. This painting, surviving even today is an organic link with the past. It shows that the same people are in existence today, who keep their own culture, unlike in South America where the old culture has been destroyed by the Spanish Conquistadores. Indian culture survives for more than 15,000 years or 25,000 years in an unbroken link with our pre-historic past.

These photos show the Rock Art site in *Gudiyatam* in Vellore District. This is a red ochre painting, which is from a very early period (Photo nos.5 and 6, page no.68). It shows figures similar to the one we see at *Iduhatti*, which seems to indicate that *Keezhvalai*, *Alambadi*, *Iduhatti* and *Vellerikombai* all show a common civilisation and their symbols also have a link with the Indus Valley civilisation symbols which came later. This shows that there is a Pan Indian Civilisation. The civilisation was a continuous one and not discontinuous as in some Western Countries. It was not brought by invaders from Asia to the west of the sub continent or Europe as 19th Century historians would have us believe.

This is a photo from *Chenrayanpalli*, which is another Rock Art site near *Gudiyatam* in Vellore District (Photo no.1, page no.71). All these Rock Art sites are fairly inaccessible. This made the Government Museum,

Chennai to bring them to you to have easy access at *Egmore* within the city. Here white ochre figures, which are considered to be of a later period, are seen. We see geometric patterns like the *kolam* designs of today (Photo no.2, page no.71). It is also shown in the gallery. These are x-ray drawings with the plus prosperity sign already seen in *Vellerikombai*. The x-ray drawings have been seen in *Alambadi*, which again reiterates the point of a common civilisation. This shows a horse figure. Can anybody say that horse was not indigenous to India after this evidence? This is a figure riding on a horse.

This photo shows the *Brahadambal* Temple at Tirugokarnam which is the titular Deity of the erstwhile *Pudukottai* royal family (Photo no.3, page no.71). Here we see paintings from the *Ramayana* from the later *Nayak* period circa 18th Century AD (Photo no.4, page no.71). These are mural paintings, which are at the later end of the continuum, which we referred to earlier, of the *Ajanta* paintings. These are seven Goddesses or *Saptamatrikas* carved out of rock, which is cut-in architecture (Photo no.6, page no.62). This temple is partially structural and partially cut-in architecture like the caves at *Mahabalipuram*.

This photo shows the famous *Sittannavasal* cave temple in Pudukottai District. Carving of beds starts from the 3rd Century AD onwards for its use as a *Jain* centre (Photo no.5, page no.71). A few paintings are from the 7th and 8th Century AD. These paintings are in the spaces in the corbels on the beams near the pillars on the roof (Photo no.6, page no.71 and Photos - page no.61). They are murals (*fresco-secco*) with the same dyes and forming the same pattern, as the *Ajanta* paintings. Most paintings date from the 9th Century onwards.

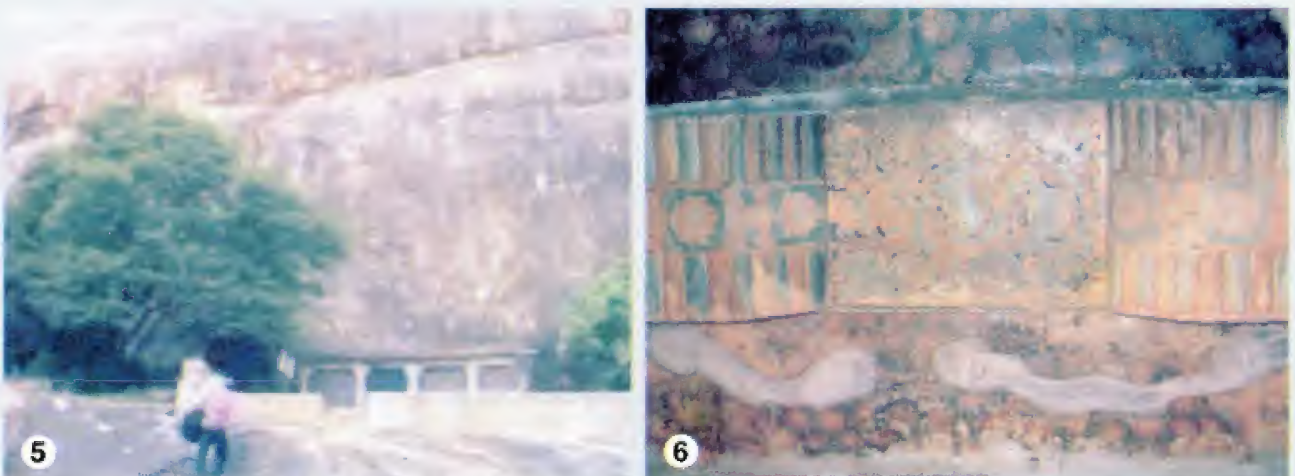
In these photos we see, Jain images carved as bas-relief on the cave wall (Photo nos.6 and 7, page no.61). This was a great centre for *Jain* ascetics



Chenrayanpalli - white ochre - Rock Art



Tirugokarnam- temple view - paintings from (Ramayana scenes)



Sittannavasal - portion of a beam with painting



Narthamalai - friezes of animals



Tirumalai - Tirthankara sculpture



Kudumiyanmalai - Ganesha (Valampuri) - bas-relief sculpture

throughout the centuries to meditate. Here we see a mural (*fresco-secco*) painting. A part of it has been obliterated. We see another *mural*, again a part of it has flaked off and whatever is left has been preserved. This corbelling recalls the *Chola* corbelling with paintings on them but because this is *Pandya* territory, we call them as *Pandya* and date them as around 9th Century AD. There is an inscription of *Ilam Gouthaman* from *Pandya* country. Therefore, this is considered to be the work of the *Pandya* kings and the period is a transition between *Pallava* and *Chola* styles, but in *Pandya* country.

This is a site called *Narthamalai* near *Pudukottai* which is the most ancient example of a *Chola* temple found so far (Photo no.1, page no.72). Nearby there are caves in which there are *Jain*, *Vaishnava* and *Saivite* sculptures. Near the entrance to these caves, there are friezes, which depict carvings of animal figures and so on (Photo no.2, page no.72). The *Jain* sculptures were mostly converted in the 13th Century AD in the later *Pandya* period into *Vaishnava* and *Saivite* sculptures. Now you see the *Sivalinga* in the temple in another cave wherein the *Linga* has been installed in the *Chola* period, which is earlier to the *Pandya* period. We now see the *Chola* temple, with *Chola* period paintings of Lord *Vishnu* with *Sankha* (conch), a musician and a dancer. This is a portrayal of Lord *Siva* as *Veerabhadra*. Similar paintings are found in the Big Temple at *Thanjavur*. From this, it is clear that from *Ajanta* through the *Chola* period paintings to *Sittannavasal*, there is continuum in Indian art across time and across space in the whole of India. Now we see, the *Sanctum Sanctorum*. It has a wall enclosing the Deity, which is circular in shape, giving a circular shape to its inner part i.e perambulatory area. The outer structure is in the *Dravida* form of temple architecture of a rectangle.

This is *Tirumalai*, a *Jain* centre consisting of a hillock and some caves

in Tiruvannamalai District a few miles from *Polur* (Photo no.3, page no.72). In this centre, which dates from the imperial *Chola* period, we see highly artistically carved *Tirthankara* figures, *Bahubali* and beautiful paintings just as in *Sittannavasal*. This is also of the same 9th and 10th Century AD period. Paintings of the Vijaynagar period are also found. We see beautiful trees and natural scenery painted in the mural paintings and stuccowork. This is a mural (*fresco-secco*) painting figure like a *Dwarapalaka*. This is a *Tirthankara* set among several other figures, which are beautifully painted. These are steps leading to the caves, which are quite dark. This is a figure of *Bahubali* and his two sisters. This is a figure of *Yakshi Ambika* and these are worshippers who come to see *Bahubali*. This shows the three tiered umbrella or *Mukkudai* above the *Tirthankara* (Photo no.4, page no.72). *Tirumalai* was a great centre of *Jainism* and it still is a living centre of *Jainism* with a *mutt*. - (Photos - page no.52).

This shows *Kudumiyanmalai* (Photo no.5, page no.72). This temple also is partially structural and has partially cut-in architecture. This temple has the oldest inscription of the *Sapthaswaras* or seven notes of classical music. The hall, which we now see, is the front pillared hall. From its beauty and style, we conclude that it is of the *Nayak* period (17th or 18th Century AD). Each pillar has got a pilaster attached to it and attached to the pilasters are elaborately carved sculptures of *Rathi*, *Manmatha* and *Ravana*, who is a great *Siva* devotee and others. Here we see *Rathi* and *Manmatha*. On the beams corresponding to the *Yali* layer of the outside wall are friezes of birds and dancers (probably some are *Devatas* or angels also). Here we see the 63 *Saivite Nayanmars* (saints) carved as bas-relief on the hill. Here we see the cut-in architecture of the temple and *Ganesa* carved as bas-relief. These are two *Dwarapalakas* in the cut-in temple below the hill. We now see the earliest example of *Ganesa* with his trunk twisted to the right called *Valampuri* in Tamil (Photo no.6, page no.72). Finally, we see members of our team perambulating the temple.

CONCLUSION

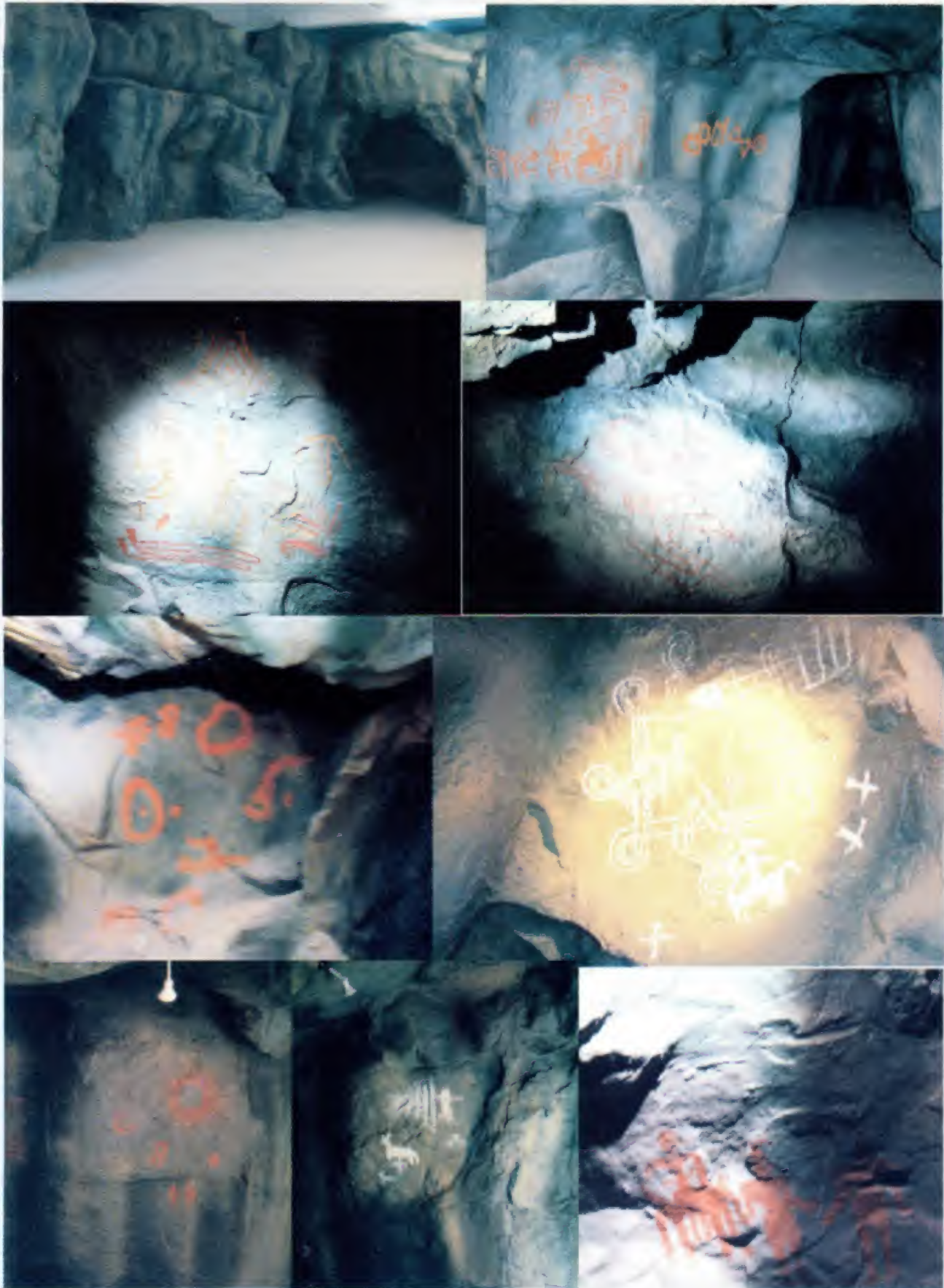
Rock Art is construed as the largest body of concrete evidence, which testifies to the artistic, cognitive and cultural beginnings of humanity at large. The depiction of the horse in Rock Art shows that the theory that it is a foreign animal is without basis. Rock Art sites bring out clearly that India had a pan Indian civilisation rather than one confined to the Indus Valley alone. Rock Art sites occur throughout the world. They are treated as the universal expression and communication of the thought process of mankind since the arrival of humanity on earth. The techniques and styles of Rock Art provide an incredibly rich array of visual information on the lives, technologies, beliefs and preoccupations of mankind. As Rock Art sites are a great source of archaeological evidence and the greatest surviving art treasures of mankind, they should be preserved for posterity.

Cave Art is a continuum of Rock Art in the historic era. It shows the transition from the nomadic era to settled civilisation. The paintings of *Ajanta*, the bas-relief and other sculputure of Udayagiri near Vidisha and *Mahabalipuram* show how human beings evolved and the high quality of civilisation, philosophical and religious thought in India from very ancient times. This art has survived till today, making India the only country in the world to have a civilisation that survives with an unbroken link to pre-history.

We have brought the petroglyphs from *Perumukkal* (Villupuram District), Red and White Ochre Rock Art from *Keezhvalai* (Villupuram District), *Alambadi* (Villupuram District), *Gudiyattam* and *Chenrayanpalli* (Vellore District), the inaccessible *Vellerikombai* and *Iduhatti* (Nilgiris District) and the Cave Art sites to you right here in Chennai in the museum.

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Rock Art and Cave Art Gallery, The Government Museum, Chennai.



Rock Art and Cave Art Gallery, The Government Museum, Chennai.



Rock Art and Cave Art Gallery - Translides, The Government Museum, Chennai.



Paleolithic tools



Neolithic tools

Collections at The Government Museum, Chennai.



